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# AUGUSTUS FENDLER'S VENEZUELAN COLLECTIONS OF FERNS AND FERN ALLIES<sup>1</sup>

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## ABSTRACT

Augustus Fendler collected over 500 collection numbers of pteridophytes in Venezuela between 1854 and 1858. These collections are noteworthy because of the large number of dispersed duplicates, rarities, and types (44 collection numbers thus far identified) among them. This paper presents an annotated list of Fendler's Venezuelan pteridophyte collections and a historical account of the collections, including a portrayal of Fendler's fascination with ferns.

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Augustus Fendler collected in northern Venezuela between 1854 and 1858, where he amassed important collections of angiosperms, ferns, fern allies, lichens, mosses, liverworts, and fungi. Although a general account of his Venezuelan collecting is given in the previous paper (Todzia, 1989), this article deals specifically with his fern collections. Fendler's pteridophyte collections are noteworthy because they represent the first intensive gathering of ferns and fern allies from the Coastal Cordillera of Venezuela, and because they are widely distributed. Consequently, they have become type specimens of a great many fern species. The following account has been assembled with the aid of Fendler's correspondence with Daniel C. Eaton and Asa Gray, at the YU and GH archives, respectively.

Fendler's Venezuelan fern collections as well as his sets of flowering plants were distributed by Asa Gray. As with the angiosperms, Fendler initially retained the first set for himself. In 1859 he received a request from Thomas Moore of the Chelsea Botanic Garden for a set, but since Moore had access to William Hooker's herbarium containing set 2, Fendler decided to sell his first set to Daniel C. Eaton, who was then a student of Gray. He did this because Eaton agreed to publish a list of these collections, and because the collections would then remain in the United States, where Fendler would

have easy access to them. In a letter to Eaton, Fendler stated, "The only set remaining with me is set No. 1 which I used for comparison and in which I felt a pride and a pleasure to lay up not only the most complete but also the finest specimens selected from the rest. There was a time when I thought I could never part with these plants. In bringing them up from their hidden places I have neither shun danger nor travelling expenses, and it was chiefly the search after *Ferns*, which induced me to cross the principal chain of the cordillera of the coast upon four different tracks. I therefore need not say how dear they are to me, and I never would have sold them to anyone except to a Botanist, who is able to make the proper use of them" [Fendler to Eaton, 24 January 1859, St. Louis]. Fendler went on to say, "For my part I have neither the necessary books, time, nor herbarium to do it. Great resources undoubtedly are necessary to determine, which of the species are new and which are not; for I have reason to believe that in works on *Ferns*, with many species, a critical and patient overhauling is very desirable, in order to disperse the existing confusion. I remember to have seen in one herbarium the same species under four different names, one of these specimens was even disposed of under a new genus" [Fendler to Eaton, 24 January 1859, St. Louis]. In total, Fendler sent Eaton close to 500 collection numbers

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with about 564 sheets. Eaton paid 10 cents a sheet for a total cost of \$56.40.

In 1860, Eaton was awarded a Bachelor of Science degree from Harvard University for his dissertation enumerating Fendler's Venezuelan fern collections along with those collected by Wright in Cuba, and a few collections of Schott and Hayes from Panama and Colombia. A year later, Eaton's dissertation was published (Eaton, 1861). Fendler, however, was not pleased with this work. In the following long passage, we can see what a keen observer Fendler was. "In regard to Mr. Eaton's *Filices* I am sorry to say that I was very much disappointed. Being in possession of the names of Dr. Engelmann's set of ferns as determined by Prof. Mettenius,<sup>4</sup> I was able to compare them with those given by Eaton and find that the names of 146 sp. agree with those determined by Mettenius, while the names of 101 spec. disagree. I am not able to say who is in the right, but should be inclined to depend more upon the one that has the longest experience in the matter [Mettenius]. Such differences of different authors are most discouraging to the student of botany and a severe drawback in the acquisition of knowledge. But what concerns me more immediately and of which I think I have reason to be solicitous, is the readiness with which Mr. Eaton throws different, quite *distinct*, species under one and the same name. I regret this, the more it may be inferred as if I purposely manufactured species for the sake of selling one and the same species over again under different numbers. Having pointed out in Mr. Eaton's set some of the more obscure characters of many species very much resembling each other, I thought I had done something to prevent mistakes. It always seemed to me, that authors who only see 1 or 2 dried specimens of each species ought to pay at least some slight regard to the opinion of a collector who had the best opportunities, and for 4 years availed himself of those opportunities to study the habits of the different ferns, and to observe them in their growing state in the different phases of their growth, not on single specimens or in single localities only, but in hundreds of different places and individuals." Fendler continued: "There may be a dozen species about which I was rather doubtful, but all the rest I consider genuine species; and as soon as I shall have time to examine Dr. Engelmann's set, I shall endeavor to point out the differences in species considered the same by Mr. Eaton. That even the

most experient [sic] authors on ferns may sometimes take 2 different species to be one and the same is proved by Prof. Mettenius calling No. 161 'a young specimen of 162.' Now the former (No. 161) is not only different in form but has also 2 to 3 oval tubers, all the fronds die at a certain season of the year, and new fronds make their appearance rather suddenly but not before the commencement of the rainy season; the latter (No. 162) is a perennial plant to be seen at all times of the year and never possessing tubers" [Fendler to Gray, 24 March 1868, St. Louis]. In fact, these two numbers do represent two species (Appendix I), and Fendler was correct.

Nevertheless, Fendler's friendship with Eaton grew, as evidenced by Fendler's 15 letters to Eaton written from Trinidad between 1878 and Fendler's death in 1883. In Trinidad, as in Venezuela, he seems to have been preoccupied with collecting ferns and seems to have particularly relished discussing his Trinidad fern collections with Eaton. Fendler, however, much preferred Venezuela over Trinidad and in his letters to Eaton, Engelmann, and Gray from Trinidad, he often mentioned how much he would like to return to Colonia Tovar. In his last letter to Eaton before his death, Fendler stated, "I long for the cool alpine air (damp though it be) for the deep shades and the eternal silence of those primeval forests, where a quarter of century ago my footsteps were wandering in search of the treasures of botany—especially those of ferns—again to go and see them, and to draw them forth from out their hiding places in the deep dells, or to bring them down from the mountain's high summit" [Fendler to Eaton, 15 June 1882, Port-of-Spain, Trinidad]. At 69, forever the fervent collector, Fendler asked Eaton if the professor could find subscribers to about 40 sets of Venezuelan ferns [Fendler to Eaton, 15 June 1882, Port-of-Spain, Trinidad]. Fendler often wrote to his correspondents that he longed to return to the "land of perpetual peace . . . the happy region of the ferns."

#### FENDLER'S FERN NOTEBOOK AND COLLECTIONS

Fendler's field notebook in the GH archives is not chronological and consecutive, but rather a catalog of species in taxonomic order. Thus, the number sequence begins with 1 (Marattiaceae), proceeds through the more primitive fern families (Osmundaceae, Schizaeaceae, Hymenophyllaceae, Gleicheniaceae, Cyatheaceae), and then continues with the more advanced ferns, genus by genus, up to number 324. Numbers after 324 were collected

<sup>4</sup> Georg H. Mettenius (1823–1866), German pteridologist, whose fern herbarium is now mostly at B.

after a trip to the United States and after he had distributed some of his material. It is obvious that the notebook was compiled after many of the collections had already been made and put into sequence. Fendler combined collections made on different dates and at different places under a single number. For example, *Fendler 6, Anemia villosa*, was collected on nine different dates (according to data on the sheet at YU) and most likely at several different localities during the years 1854, 1855, and 1856.

Fendler probably revisited many collection sites in an attempt to amass additional material of a given number, because he intended to collect in large sets for sale to as many individuals or herbaria as possible. It appears that he tried to collect in sets of 20, although he gathered 40 sheets of *Fendler 23, Trichomanes reptans*. The number of collections appears in the upper right-hand corner of the labels on sheets at YU but does not appear on the labels of Fendler collections in other herbaria. In some cases, Fendler kept an account of material of varying stages, e.g., he collected 26 young and 12 old specimens of *Marattia laevis* (*Fendler 3*). In other instances, he recorded the number of specimens in different categories, e.g., he collected 20 specimens of no. 94, *Paesia glandulosa*, and 5 more with the rhizome. For many numbers through about 324, specimens were collected in rather large sets. Thereafter, the sets were generally much smaller, often only a few sheets. Most of the numbers after 324 were gathered in the years 1855 to 1858, whereas most collections of the numbers before 325 were made in 1854, with additions to the set made in 1855 and 1856.

Fendler's keen eye is evident by the fact that, even though he often collected the same species (or number) at different times and/or localities, there are very few mixed gatherings. He must have had a very discriminating eye for differences. When in doubt, he often gave aberrant collections Greek letter designations  $\alpha$  and  $\beta$  under the same number, or labeled the additions "ad 56"; sometimes these represent noteworthy taxonomic variations (occasionally different species), sometimes only forms of little taxonomic significance. The following are taxonomically mixed collections: 16, 31, 64, 72, 73, 83, 98, 117, 143, 179, 181, 185, 187, 221, 224, 232, 258?, 259, 293, 294, 322, 324, 364, 378, 380, and 473. Some of these probably represent inadvertent mixing or misnumbering, whereas others are in large genera of great taxonomic difficulty, e.g., *Elaphoglossum*, *Thelypteris*, and *Selaginella*.

Fendler's collection numbers range from 1 to

499. Of these, 44 are thus far identified as types. We have seen specimens or notebook information for all numbers except 2 and 339. In addition, neither we nor Eaton (1861) saw specimens numbered 337, 345, 346, 384, 392, 401, 427, 442, 458, 462, 478, 484, or 490. The notebook at Harvard contains entries for numbers 58 to 499; inexplicably, the early numbers are missing.

Because Fendler gave the same collection number to plants collected at different times and localities, it often is impossible to determine the locality and date of a particular specimen. In a few cases there is only a single date on the specimen and in the notebook. In the list that follows (Appendix I), dates are given only where there is reasonable certainty that the entire gathering was made on a single date at a single place. For those numbers that were collected on more than one date, we give the total number of dates (as indicated from the notebook and on the specimens at YU). For all numbers, the size of the set, when known, is given.

Fendler's Venezuelan pteridophytes were widely distributed, and specimens have been located in the following 16 herbaria: B, BM, BR, CU, F, G, GH, GOET, K, MO, NY, P, PH, S, US, and YU.

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#### APPENDIX I

Determinations of Fendler's pteridophyte collections from Venezuela, Estado Aragua and adjacent states, Colonia Tovar, and vicinity, 1854-1855. The fractional number in square brackets is the number of collection dates listed by Fendler in his notebook and on the set at YU (numerator) over the number of sets (denominator), as indicated on specimens at YU. If a given number was collected on a single date only, the exact date is given. Determinations are by Alan Smith unless otherwise indicated. Abbreviations: JM = John T. Mickel; RT = Rolla M. Tryon; AT = Alice F. Tryon; ME = A. Murray Evans; DL = David B. Lellinger; RM = Robbin C. Moran; BO = Benjamin Øllgaard. (s) = data from specimen at YU; (n) = data from Fendler notebook at GH.

1. *Danaea moritziana* C. Presl, vel aff.; MO, YU. [7/20]; 6,000-7,000 ft. (s).
2. Not located.
3. *Marattia laevis* J. E. Smith; MO, YU-2. [3/38]; 6,500 ft. (s).
4. *Botrychium* sp.; YU; cited by Eaton (1861) as *B. decompositum* Mart. & Gal.
5. *Osmunda regalis* L.; MO, YU. [2/24]; 5,900 ft. (s).
6. *Anemia villosa* Humb. & Bonpl. ex Willd.; MO, YU; det. JM. [9/20]; 5,000-7,000 ft. (s).
7. *Anemia ferruginea* H.B.K. var. *ferruginea*; MO, YU; det. JM. [2/20]; 6,500 ft. (s).
8. *Anemia hirsuta* (L.) Sw.; MO, YU; det. JM. [6/17]; 5,500 ft. (s).
9. *Anemia oblongifolia* (Cav.) Sw.; MO, YU; det. JM. [4/20]; 5,500-6,000 ft. (s).
- 9 $\beta$ . *Anemia oblongifolia* (Cav.) Sw.; YU. [?/1?].
10. *Anemia oblongifolia* (Cav.) Sw.; MO-2, YU; det. JM. [6/20]; 6,000 ft. (s).
11. *Anemia pastinacaria* Moritz ex Prantl; MO-2, YU; det. JM. [7/20]; 6,000 ft. (s).
12. *Anemia* sp., undescribed?; YU. 11/9/54 [1/2]; 3,500 ft. (s).
- 12 $\beta$ . *Anemia* sp., undescribed?; YU.
13. *Anemia phyllitidis* (L.) Sw.; MO, YU; det. JM. [5/20]; 3,000-4,000 ft. (s).
14. *Lygodium venustum* Sw.; MO, YU. [6/19] (s).
15. *Anemia hirsuta* (L.) Sw.; MO, YU; det. JM. [3/9]; 5,200 ft. (s).
16. *Trichomanes (Pachychaetum) rigidum* Sw.; MO-2, YU-2. [13/30]; 6,000-7,000 ft. (s).
16. *Trichomanes (Lacosteopsis) diaphanum* H.B.K.; MO.
17. *Trichomanes (Lacosteopsis) diaphanum* H.B.K.; MO-2, YU. [7/50]; 6,000-7,000 ft. (s).
18. *Trichomanes (Lacosteopsis) diaphanum* H.B.K.; MO-2, US-2, YU. [2/21] (s).
19. *Trichomanes (Lacosteopsis) diaphanum* H.B.K.; US—not seen.
20. *Trichomanes (Lacosteopsis) radicans* Sw.; MO-3, US, YU-3. [10/30]; 6,000-6,500 ft. (s).
21. *Trichomanes (Lacosteopsis) rupestre* (Raddi) Bosch; MO-2, US, YU-2. [6/20]; 5,000-6,000 ft. (s).
22. *Trichomanes (Lacosteopsis) capillaceum* L.; MO-2, US, YU. [3/21]; 6,000-7,000 ft. (s).
23. *Trichomanes (Didymoglossum) reptans* Sw.; B, G, GH, MO-4, US, YU; cited by Wessels Boer (1962). [13/40]; 6,000-7,000 ft. (s).
24. *Trichomanes (Didymoglossum) pusillum* Sw.; B, G, GH, L, MO-2, S, US, YU; cited by Wessels Boer (1962). [6/25]; 6,500 ft. (s).
- ad 24. *Trichomanes (Didymoglossum) pusillum* Sw.; YU. 18/3/56 [1/?] (s).
25. *Trichomanes (Didymoglossum) ovale* (Fourn.) W. Boer. *Didymoglossum ovale* Fourn., Bull. Soc. Bot. France 19: 240. 1872. HOLOTYPE, P; ISOTYPES, B, G, GH, MO-2, YU. Cited by Wessels Boer (1962). 24/7/56 [1/?]; 6,000 ft. (s).
- ad 25. *Trichomanes (Didymoglossum) ovale* (Fourn.) W. Boer; YU. [2/20] (s).
26. *Trichomanes (Achomanes) robustum* Fourn.; MO, US, YU. [4/21]; 5,500 ft. (s).
27. *Hymenophyllum (Ptychophyllum) fucoides* (Sw.) Sw.; MO-2, US, YU. [14/20]; 7,000-8,000 ft. (s).
- 27 $\beta$ . *Hymenophyllum (Ptychophyllum) fucoides* (Sw.) Sw.; YU. [3/6] (s).
28. *Hymenophyllum (Mecodium) axillare* Sw.; MO-2, YU. [16/21]; 6,500 ft. (s).
29. *Hymenophyllum (Hymenophyllum) tunbrigense* (L.) J. E. Smith; MO, US, YU. 9/11/54 [1/5]; 7,000-8,000 ft. (s).
30. *Hymenophyllum (Mecodium) polyanthos* (Sw.) Sw.; MO-2, YU. [5/40]; 6,000-7,000 ft. (s).
31. *Hymenophyllum (Sphaerocionium)* sp., undescribed?; YU. [5/15]; 6,500-7,000 ft. (s).
31. *Hymenophyllum (Mecodium) fendlerianum* Sturm in Martius; MO.
31. *Hymenophyllum (Sphaerocionium) hirsutum* (L.) Sw., vel aff.; MO.
32. *Hymenophyllum (Mecodium) apiculatum* Mett. ex Kuhn, Linnaea 35: 391. 1868. ISOTYPES, MO, US, YU.
- ad 32. *Hymenophyllum (Mecodium) apiculatum* Mett. ex Kuhn; YU. 26/7/56 [1/?] (s).
33. *Hymenophyllum (Sphaerocionium) microcarpum* Desv.; US, YU; cited by Morton (1947). [3/20]; 6,500-7,200 ft. (s).
34. *Hymenophyllum (Mecodium) undulatum* (Sw.) Sw.; MO, US, YU. [3/18]; 6,200 ft. (s).
35. *Hymenophyllum (Mecodium) fendlerianum* Sturm

in Martius, *Fl. Bras.* 1(2): 291. 1859. LECTOTYPE (chosen by Lellinger, 1984), US; ISOLECTOTYPES, BR, MO.

36. *Hymenophyllum (Mecodium) asplenoides* Sw.; MO, US.

37. *Hymenophyllum (Sphaerocionium) hirsutum* (L.) Sw.; GH, MO, NY, YU; cited by Morton (1947). [4/20]; 6,000 ft. (s).

37 $\beta$ . *Hymenophyllum (Sphaerocionium) hirsutum* (L.) Sw.; YU. 29/1/57 [1/1] (s).

38. *Hymenophyllum (Sphaerocionium) fragile* (Hedwig) C. Morton; GH, MO—2, NY, US, YU; cited by Morton (1947). [6/?]; 6,000–7,000 ft. (s).

39. *Hymenophyllum (Sphaerocionium) karstenianum* Sturm, *Bot. Zeitung* (Berlin) 17: 298. 1859. ISOSYNTYPES, GH, MO—2, US, YU. Cited by Morton (1947). [4/21]; 6,200 ft. (s).

40. *Sticherus rubiginosus* (Mett.) Nakai; MO, US, YU—2. [3/15]; 8,000 ft. (s).

41. *Sticherus nudus* (Moritz ex Reichardt) Nakai; MO, YU. [4/17]; 6,000–7,000 ft. (s).

42. *Sticherus bifidus* (Willd.) Ching; MO, YU—2. [3/11]; 6,000–7,000 ft. (s).

43. *Sticherus penniger* (Martius) Copel.; MO, YU. [5/19]; 6,000 ft. (s).

44. *Dicranopteris flexuosa* (Schrader) L. Underw.; MO, YU. [4/20]; 6,200 ft. (s).

45. *Diplopterygium bancroftii* (Hook.) A. R. Smith; MO, US—2, YU. [4/20]; 6,500 ft. (s).

46. *Cyathea speciosa* Willd.; GH, MO, YU—3; cited by R. Tryon (1976). 17/9/55 [1/20]; 4,800 ft. (s).

46 $\beta$ . *Cyathea speciosa* Willd.; YU. 12/12/56 [1/1] (s).

47. *Cyathea villosa* Willd.; MO, YU; cited by Barrington (1978) as *Trichipteris villosa* (Willd.) R. Tryon. 3/12/54 [1/21]; 6,500 ft. (s).

48. *Lophosoria quadripinnata* (J. Gmelin) C. Chr.; MO, YU—3. [2/21]; 7,800 ft. (s).

49. *Cyathea tryonorum* (Riba) Lellinger; MO—2, YU—4. [4/18]; 6,000–6,800 ft. (s).

49 $\beta$ . *Cyathea tryonorum* (Riba) Lellinger; YU. 12/12/56 [1/1] (s).

50. *Cyathea ebenina* Karsten; GH, YU—3; cited by R. Tryon (1976). [?/1] 6,500 ft. (s).

51. *Cyathea fulva* (Mart. & Gal.) Fée; YU. [3/?]; 6,500 ft. (s).

52. *Cyathea fulva* (Mart. & Gal.) Fée; F, GH, MO—2, YU—2; cited by R. Tryon (1976). [3/21]; 6,000–7,000 ft. (s).

53. *Cyathea squamata* (Klotzsch) Domin; F, GH, MO—2, NY, YU; these are ISOTYPES of *Alsophila caracasana* Klotzsch var. *fendleriana* Domin, Pterid. Dominica 95. 1919. Cited by Barrington (1978) as *Trichipteris microphylla* (Klotzsch) R. Tryon. [2/20]; 6,500–7,000 ft. (s).

54. *Cyathea gibbosa* (Klotzsch) Domin; GH, MO, US, YU; cited by Barrington (1978) as *Trichipteris gibbosa* (Klotzsch) Barrington. 26/8/54 [1/14]; 6,000–6,500 ft. (s).

55. *Cyathea pungens* (Willd.) Domin; GH, MO, NY, YU—2; cited by Barrington (1978) as *Trichipteris procera* (Willd.) R. Tryon. [2/20]; 6,500 ft.; seaside (s).

56. *Cyathea caracasana* (Klotzsch) Domin var. *caracasana*; GH, MO, YU—2; cited by R. Tryon (1976). [3/13]; 6,000–6,500 ft. (s).

ad 56. *Cyathea caracasana* (Klotzsch) Domin var. *caracasana*; YU. 28/6/56 [1/?] (s).

57. *Dicksonia sellowiana* Hook.; YU; 19/6/54 [1/16]; 6,800–7,800 ft. (s).

58. *Dennstaedtia cicutaria* (Sw.) T. Moore; YU. 1/6/54 [1/17]; 6,500 ft.; Colonia Tovar (n).

59. *Dennstaedtia dissecta* (Sw.) T. Moore; MO. [3/?]; 6,000 ft.; Colonia Tovar (n).

60. *Dennstaedtia arborescens* (Willd.) Ekman ex Maxon; MO. [4/?]; 6,500–7,500 ft.; Colonia Tovar (n).

61. *Saccoloma domingense* (Sprengel) C. Chr.; MO—2, YU—2. [6/20]; 6,000–7,000 ft.; Colonia Tovar (n).

61 $\beta$ . *Saccoloma domingense* (Sprengel) C. Chr.; YU. 29/1/57 [1/1] (s).

62. *Loxoscaphe theciferum* (H.B.K.) T. Moore; MO, YU. [10/28]; 6,000 ft.; Colonia Tovar (n).

63. *Lindsaea klotzschiana* Moritz in Ettingshausen; YU. [7/16]; 6,000–6,800 ft.; Colonia Tovar, also between Maracai and Choroni (n).

63 $\alpha$  &  $\beta$ . *Lindsaea klotzschiana* Moritz in Ettingshausen; BR, G, GH, GOET, K, MO, PH, US; cited by Kramer (1957).

63 $\beta$ . *Lindsaea klotzschiana* Moritz in Ettingshausen; YU. 12/12/56 [1/8] (s).

64. *Hypolepis viscosa* Karsten; YU—2. [4/20]; 6,500 ft.; Colonia Tovar (n).

64. *Hypolepis bogotensis* Karsten?; MO.

64 $\beta$ . *Hypolepis bogotensis* Karsten?; YU. 17/6/56 [1/?]; highest mountains, Lagunassa (s).

64 $\beta$ . *Hypolepis viscosa* Karsten; YU.

65. *Cheilanthes microphylla* (Sw.) Sw.; MO. [5/?]; 2,000–4,000 ft.; La Victoria, also between Caracas and La Guayra (n).

66. *Hypolepis parallelogramma* (Kunze) C. Presl; MO, YU—4. [3/20]; 6,500 ft.; Colonia Tovar (n).

ad 66. *Hypolepis parallelogramma* (Kunze) C. Presl; YU. 6/1/57 [1/?] (s).

67. *Adiantopsis radiata* (L.) Fée; YU. [2/?]; Maya a few mi. S of Colonia Tovar (n).

68. *Adiantum braunii* Mett. ex Kuhn; MO, YU. 25/10/54 [1/20]; 3,500 ft.; a few mi. SW of Colonia [Tovar] (n).

69. *Adiantum tenerum* Sw.; MO. [3/?]; 3,000–3,500 ft.; lower valleys around Colonia [Tovar] (n).

70. *Adiantum tenerum* Sw.; MO, YU. [2/7]; 3,200 ft.; Biscaina, S of Colonia [Tovar], also near Caracas (n).

71. *Adiantum poiretii* Wikström; MO, YU. [2/15]; 3,000–4,000 ft.; a few mi. SW of Colonia Tovar, also near Caracas (n).

72. *Adiantum henslovianum* Hook.; YU. [4/20]; 4,000 ft.; a few mi. SW of Colonia Tovar (n).

72. *Adiantum capillus-veneris* L.; MO.

73. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. [3/14]; 3,000–4,000 ft.; Caracas, also a few mi. S of Colonia [Tovar] (n).

ad 73. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. 19/1/56 [1/?] (s). Same sheet as 73.

73. *Adiantum lunulatum* Burm. f.; MO, YU.

73/76. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; MO.

74. *Adiantum raddianum* C. Presl; YU. [4/4]; 3,000–3,500 ft.; 6–9 mi. S of Colonia [Tovar] (n).

75. *Adiantum concinnum* Humb. & Bonpl. ex Willd.;

MO—2, YU—2. [5/20]; 3,000–4,000 ft.; 6–9 mi. S of Colonia [Tovar] (n).

ad 75. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. [4/7] (s).

75 $\beta$ . *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. [3/17] (s).

76. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. 28/6/55 [1/3]; 5,000–6,000 ft.; 9 mi. S of Colonia [Tovar] (n).

77. *Adiantum concinnum* Humb. & Bonpl. ex Willd.; YU. [3/2]; 2,000–3,000 ft.; La Victoria to Biscaina (n).

78. *Adiantum henslovianum* Hook.; MO. [2/?]; 3,000–4,000 ft.; around Caracas (n).

79. *Adiantum patens* Willd.; MO, YU. [4/16]; 3,000–4,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

80. *Adiantum polypodium* Willd.; MO, YU—2. [5/20]; 3,000–4,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

81. *Adiantum deflectens* Martius; LECTOTYPE, US (chosen by Lellinger, Proc. Biol. Soc. Washington 89: 703. 1977) of *A. deflectens* var. *tremulum* Hieron., Bot. Jahrb. Syst. 34: 487 1904, as "tremula"; ISOLECTOTYPES, MO—2, YU. [2/20]; 2,000–3,000 ft.; between La Victoria and Biscaina, S of Colonia Tovar (n).

82. *Adiantum lunulatum* Burm. f.; MO, YU. [2/12]; 2,500 ft.; near La Victoria and south of Laguna de Valencia (n).

83. *Adiantum pulverulentum* L.; YU. [3/16]; 2,500–4,000 ft.; a few mi. S and SW of Colonia [Tovar], also Piedernales (n).

83. *Adiantum fructuosum* Sprengel; MO.

84. *Adiantum serratodentatum* Willd.; MO, YU. [2/18]; 2,500–3,500 ft.; Biscaina and Piedernales in savannahs at margin of woods (n).

85. *Adiantum villosum* L.; MO, YU—2. [4/8]; 2,000–3,000 ft.; Piedernales, La Victoria, between Caracas and La Guayra (n).

ad 85. *Adiantum tetraphyllum* Humb. & Bonpl. ex Willd.; YU.

86. *Adiantum pulverulentum* L.; MO, YU. [8/20]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar, also Piedernales (n).

87. *Adiantum petiolatum* Desv.; YU. 25/1/55 [1/2]; 2,000 ft.; Piedernales, near Güigüe (n).

88. *Adiantum macrophyllum* Sw.; MO. [7/21]; 2,500–3,500 ft.; valley of the Tuy River, Maya Piedernales (n).

89. *Pellaea ovata* (Desv.) Weath.; MO—2, YU; det. AT. [7/20]; 6,500 ft.; a few mi. S of Colonia Tovar in a savannah between rocks (n).

90. *Cheilanthes marginata* H.B.K.; MO, YU. [3/20]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

91. *Doryopteris pedata* (L.) Fée var. *palmata* (Willd.) Hicken; MO; YU—2; det. RT. [6/20]; 3,000–4,000 ft.; lower valleys S and SW of Colonia Tovar (n).

92. *Cheilanthes concolor* (Langsd. & Fischer) R. & A. Tryon; MO, YU. [2/20]; 2,000–3,000 ft.; seaside of mountain range between Caracas and Guayra and between Maracai and Choroni (n).

93. *Histiopteris incisa* (Thunb.) J. Smith; MO, YU—3. [2/25]; 7,500 ft.; highest mountains east of Colonia Tovar (n).

94. *Paesia glandulosa* (Sw.) Kuhn; MO, YU—2. [2/25]; 7,500 ft.; highest mountains E of Colonia Tovar (n).

95. *Pteris gigantea* Willd.; MO, US, YU—2. [3/18]; 3,500 ft.; lower valleys S of Colonia [Tovar] (n).

96. *Pteris grandifolia* L.; MO, YU—2. [2/14]; 2,000–2,500 ft.; between Caracas and La Guayra, also above Hacienda Curisal (n).

97. *Pteris consanguinea* Mett. ex Kuhn, Linnaea 36: 89. 1869. ISOSYNTYPES, K—photo US, MO, YU—3. [2/16]; 6,700 ft.; mountains south of Colonia [Tovar] (n).

98. *Pteris podophylla* Sw.; MO, US, YU—2. [4/26]; 5,500–7,000 ft.; valley of the Tuy and headwaters of San Carlos River (n).

98. *Pteris propinqua* Agardh; YU. [?/3]; 7,000 ft. (s).

99. *Pteris propinqua* Agardh; YU. 25/1/55 [1/3]; 2,300 ft.; Piedernales near Güigüe (n).

100. *Lonchitis hirsuta* L.; MO, YU. 5/6/55 [1/20]; 3,200 ft.; small distance above Biscaina, 9 mi. S of Colonia [Tovar] (n).

101. *Pteris deflexa* Link; MO, YU. [5/10]; 6,000 ft.; Colonia Tovar (n).

102. *Pteris deflexa* Link; MO, US, YU—3. [7/20]; 7,000 ft.; a few mi. W of Colonia Tovar, high mountains (n).

103. *Pteris quadriaurita* Retz.; MO, YU. [3/1]; 4,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

103 $\beta$ . *Pteris quadriaurita* Retz.; YU—2. 26/1/57 [1/1] (s).

104. *Pteridium arachnoideum* (Kaulf.) Maxon; MO, YU—3. [4/20]; 5,000–7,000 ft.; Colonia Tovar (n).

105. *Pteris longifolia* L.; MO, US, YU. [7/20]; 6,000–6,500 ft.; savannah a few mi. S of Colonia [Tovar] (n).

106. *Blechnum occidentale* L.; MO—2. [3/?]; 4,000–6,500 ft.; mountains S of Colonia, also Caracas (n).

107. *Blechnum occidentale* L.; YU; cited by Eaton (1861). [3/?]; 6,800 ft.; a few mi. W of Colonia Tovar (n).

108. *Blechnum occidentale* L.; YU; cited by Eaton (1861). 27/5/54 [1/?]; 6,000 ft.; a few mi. SW of Colonia [Tovar] (n).

109. *Blechnum* hybrid?, possibly *B. occidentale* L.  $\times$  *B. polypodioides* Raddi; MO—2. [3/?]; 2,000–3,500 ft.; near Caracas, also low valleys S of Colonia [Tovar], Piedernales (n).

110. *Blechnum polypodioides* Raddi; MO—2. [4/?]; 2,000–4,000 ft.; near Caracas, La Victoria (n).

110 $\beta$ . *Blechnum* sp.; YU; cited by Eaton (1861) as *B. polypodioides*.

111. *Blechnum* sp.; YU; cited by Eaton (1861) as *B. longifolium* H.B.K. 25/1/55 [1/?]; 2,300 ft.; Piedernales (n).

112. *Blechnum*  $\times$  *caudatum* Cav. [*B. fraxineum* Willd.  $\times$  *B. occidentale* L.]; MO. [3/?]; 3,000–4,000 ft.; lower valleys a few mi. S and SW of Colonia Tovar (n).

113. *Blechnum*  $\times$  *caudatum* Cav. [*B. fraxineum* Willd.  $\times$  *B. occidentale* L.]; MO. [3/?]; 5,500 ft.; Tuy River valley below Colonia [Tovar] (n).

114. *Blechnum fraxineum* Willd.; MO. [3/?]; 3,000–3,500 ft.; Macarao valley, 9 mi. above Las Aguntas (n).

115. *Blechnum* sp.; YU; cited by Eaton (1861) as *B.*

*longifolia* H.B.K. [2/?]; 3,000 ft.; Piedernales, also between Caracas and La Guayra (n).

116. *Blechnum* sp.; YU; cited by Eaton (1861) as *B. fendleri* Hook. 25/1/55 [1/?]; 2,300 ft.; Piedernales (n).

117. *Salpichlaena volubilis* (Kaulf.) J. Smith; MO—2. [3/?]; 6,000–7,000 ft.; Colonia Tovar (n).

117. *Arachniodes denticulata* (Sw.) Ching; MO.

118. *Blechnum cordatum* (Desv.) Hieron.; MO. [3/?]; 6,500–7,200 ft.; a few mi. W of Colonia [Tovar] (n).

119. *Blechnum cordatum* (Desv.) Hieron.; MO. [5/?]; 7,000 ft.; a few mi. S and SW of Colonia Tovar (n).

120. *Blechnum* sp.; YU; cited by Eaton (1861) as *Lomaria procera* Sprengel [possibly *B. cordatum* (Desv.) Hieron.]. 16/8/55 [1/?]; 3,000 ft.; between Caracas and La Guayra (n).

121. *Blechnum* aff. *cordatum* (Desv.) Hieron.; MO. 24/6/55 [1/?]; 8,000 ft.; highest mountains 12 mi. E of Colonia Tovar (n).

122. *Blechnum* sp.; YU; cited by Eaton (1861) as *Lomaria procera* Sprengel [possibly *B. cordatum* (Desv.) Hieron.]. No data in notebook.

123. *Asplenium rutaceum* (Willd.) Mett.; MO, US, YU. [3/21]; 6,500 ft.; Colonia Tovar and seaside of mountains (n).

124. *Asplenium cristatum* Lam.; MO, YU. [15/23]; 6,000–7,000 ft.; Colonia Tovar (n).

ad 124. *Asplenium cristatum* Lam.; YU. 25/1/55 [1/8] (s).

124β. *Asplenium* aff. *cristatum* Lam.; MO, US, YU. [5/11]; rachis winged.

125. *Asplenium flabellulatum* Kunze; MO, US, YU—3. [6/23]; 6,000–7,000 ft.; Colonia Tovar (n).

125. *Asplenium flabellulatum* Kunze var. *partitum* Klotzsch; MO.

126. *Asplenium radicans* L.; MO—2, US, YU. [5/13]; 6,000–7,000 ft.; around Colonia Tovar (n).

126β. *Asplenium radicans* L.; YU. [?/4].

127. *Asplenium radicans* L.?; MO—2, US, YU. [6/21]; 4,000–5,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

127β. *Asplenium flabellulatum* Kunze var. *partitum* Klotzsch; YU. 8/1/57 [1/1] (s).

128. *Diplazium cristatum* (Desr.) Alston; MO, US, YU. [6/18]; 6,500 ft.; Colonia Tovar (n).

128β. *Diplazium cristatum* (Desr.) Alston; YU. 9/2/57 [1/1] (s).

129. *Diplazium caracasanum* (Willd.) Kunze ex T. Moore; MO, US, YU. [7/16]; 6,500 ft.; Colonia Tovar (n).

129β. *Diplazium caracasanum* (Willd.) Kunze ex T. Moore; MO, YU. 8/1/57 [1/9] (s).

130. *Asplenium pumilum* Sw.; MO, US, YU. [6/24]; 2,000–4,000 ft.; a few mi. SW of Colonia [Tovar], also near La Victoria and between Caracas and La Guayra (n).

131. *Asplenium obtusifolium* L.; MO, US, YU. [3/22]; 5,000–5,500 ft.; around Colonia Tovar, in wet places on rocks (n).

132. *Asplenium squamosum* L.; MO, YU—2; cited by Morton & Lellinger (1966) at GH, NY. 8/10/55 [1/11]; 7,200 ft.; 5 mi. W of Colonia Tovar, upon rocks (n).

133. *Asplenium formosum* Willd.; MO, US, YU. [5/27]; 4,000 ft.; a few mi. SW of Colonia Tovar, also several mi. above Choroni (n).

134. *Asplenium monanthes* L.; MO, US, YU. [2/23]; 4,000 ft.; a few mi. SW of Colonia [Tovar] (n). One other sheet at MO is *Asplenium cristatum* Lam.

135. *Asplenium harpeodes* Kunze; MO—3, YU. [13/22]; 6,500–7,500 ft.; around Colonia Tovar (n).

136. *Asplenium laetum* Sw., vel aff.; MO, US, YU. [5/20]; 3,000–4,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

137. *Asplenium raddianum* Gaud.; MO, US, YU—2. [14/20]; 6,000–7,000 ft.; Colonia Tovar (n).

138. *Asplenium claussenii* Hieron., Hedwigia 60: 241. 1918. LECTOTYPE (chosen by Morton & Lellinger, 1966), B; ISOLECTOTYPES, MO, US, YU. [5/20]; 4,000–5,000 ft.; near Colonia Tovar (n).

138β. *Asplenium claussenii* Hieron.; YU. 4/2/57 [1/?] (s).

139. *Asplenium ruizianum* Klotzsch; MO, YU. [3/20]; 4,000 ft.; a few mi. S and SW of Colonia [Tovar] (n).

139β. *Asplenium ruizianum* Klotzsch; US, YU. [2/18] (s).

139γ. *Asplenium claussenii* Hieron.; YU. 25/1/55 [1/1] (s).

140. *Asplenium cirrhatum* Rich. ex Willd.; MO, YU. Mixed with *A. radicans* L. at YU. [5/23]; 7,000 ft.; seaside of mountains N of Colonia [Tovar] (n).

141. *Asplenium auritum* Sw. var. *obtusum* Kunze ex Mett.; MO. [2/?]; 4,000 ft.; a few mi. SW of Colonia Tovar (n).

142. *Asplenium monodon* Liebm.?; MO, YU. [6/20]; 6,000 ft.; Colonia Tovar (n).

ad 142. *Asplenium monodon* Liebm.?; YU. [4/?] (s).

142β. *Asplenium monodon* Liebm.; YU. [2/1] (s).

143. *Asplenium abscissum* Willd.; MO, YU. [9/20]; 6,400 ft.; Colonia Tovar (n).

143. *Asplenium oligophyllum* Kaulf.; MO.

143β. *Asplenium abscissum* Willd.; MO, YU. 4/10/54 [1/13] (s).

143γ. *Asplenium melanopus* Sodiro; YU. 19/12/54 [1/1] (s).

144. *Asplenium auriculatum* Sw., vel aff.; MO—2, YU. [11/22]; 6,000–7,000 ft.; Colonia Tovar (n).

145. *Asplenium alatum* Humb. & Bonpl. ex Willd.; MO, US, YU. [6/20]; 6,500 ft.; Colonia Tovar (n).

146. *Diplazium diplazioides* (Klotzsch & Karsten ex Klotzsch) Alston; YU. 28/9/55 [1/2]; 6,500 ft.; seaside of mountains N of Colonia [Tovar] (n).

147. *Diplazium hians* Kunze ex Klotzsch; US, YU—2. 28/6/54 [1/9]; 6,000 ft.; Colonia Tovar (n).

148. *Diplazium hians* Kunze ex Klotzsch; MO, YU—2. [2/5]; 5,600 ft.; Tuy River valley below Colonia [Tovar], seaside of mountains (n).

149. *Diplazium diplazioides* (Klotzsch & Karsten ex Klotzsch) Alston; MO, US, YU. [5/9]; 7,000–8,000 ft.; highest mountains around Colonia [Tovar] (n).

150. *Diplazium* aff. *striatum* (L.) C. Presl; MO, US, YU. [3/13]; 4,000 ft.; San Carlos River valley, a few mi. SW of Colonia [Tovar] (n).

151. *Diplazium mutilum* Kunze; MO, US, YU. [3/11]; 4,500 ft.; a few mi. S and SW of Colonia [Tovar] (n).

152. *Diplazium centripetale* (Baker) Maxon, vel aff.; MO, US, YU. 28/9/54 [1/10]; 6,000 ft.; seaside of mountains N of Colonia [Tovar] (n).

153. *Diplazium celtidifolium* Kunze; MO, US—3, YU. [5/20]; 6,000–7,000 ft.; around Colonia Tovar (n).

154. *Diplazium plantaginifolium* (L.) Urban; MO, US—2, YU. 29/8/54 [1/26]; 5,000–6,000 ft.; Tuy River valley below Colonia [Tovar] (n).

155. *Asplenium serra* Langsd. & Fischer; MO, YU—3. [9/20]; 7,000 ft.; around Colonia Tovar (n).

156. *Asplenium lividum* Mett. ex Kuhn; ISOTYPES, MO, US. Cited by Morton & Lellinger (1966). 25/10/54 [1/17]; 4,000 ft.; San Carlos River valley (n).

157. *Asplenium praemorsum* Sw.; MO, YU. [9/21]; 4,000–7,000 ft.; around Colonia Tovar, also 15 mi. W of Caracas (n).

157 $\beta$ . *Asplenium praemorsum* Sw.; YU. 27/2/57 [1/1] (s).

157?. *Asplenium praemorsum* Sw.; YU. [2/?].

158. *Thelypteris (Amauropelta) pilosohispida* (Hook.) Alston; GH, MO, YU—2. [9/20]; 6,000–7,000 ft.; Colonia Tovar (n).

159. *Thelypteris (Amauropelta) diplazioides* (Moritz ex Mett.) Ching; B, CU, GH—2, MO, US, YU—2. [3/16]; 5,500–6,000 ft.; seaside of mountains N of Colonia Tovar (n).

160. *Didymochlaena truncatula* (Sw.) J. Smith; MO, YU—3. [12/18]; 6,000–7,000 ft.; Colonia Tovar, also seaside of mountains N of Colonia Tovar (n).

161. *Nephrolepis occidentalis* Kunze; MO—2, YU. [2/22]; 3,000–4,000 ft.; a few mi. S of Colonia Tovar, also La Victoria (n). "Plant annual from tubers" (s).

162. *Nephrolepis pendula* (Raddi) J. Smith; MO—2, YU—2. [5/21]; 4,000–6,000 ft.; a few mi. S of Colonia [Tovar], also mountains N of Caracas (n).

162 $\beta$ . *Nephrolepis pendula* (Raddi) J. Smith, YU. [?/1].

163. *Athyrium skinneri* (Baker) C. Chr.; YU. 25/1/55 [1/1]; 3,000 ft.; Piedernales near Güigüe (n).

164. *Tectaria heracleifolia* (Willd.) L. Underw.; MO, US, YU. [5/9]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

164 $\beta$ . *Tectaria heracleifolia* (Willd.) L. Underw.; YU. [2/3].

165. *Tectaria incisa* Cav., vel aff.; MO, YU—3. [6/17]; 4,000 ft.; a few mi. SW of Colonia Tovar (n).

165 additional. *Tectaria trifoliata* (L.) Cav.; YU. 12/12/56 [1/1] (s).

165 $\beta$ . *Tectaria incisa* Cav.; YU. 22/4/58 [1/1]; 4,000 ft.; seaside of mountains N of Petaquire (s).

166. *Tectaria incisa* Cav.; YU. [3/1]; 2,000–4,000 ft.; a few mi. SW of Colonia Tovar (n).

167. *Hemidictyum marginatum* (L.) C. Presl; MO, YU—2. 7/3/57 [1/?]; 3,000 ft.; seaside of mountain range between Valencia and San Estevan (n).

168. *Dryopteris patula* (Sw.) L. Underw.; MO—2, US, YU—2. [3/34]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

169. *Dryopteris patula* (Sw.) L. Underw.; YU. 21/10/54 [1/2]; 3,200 ft.; Maya River valley, a few mi. S of Colonia Tovar (n).

170. *Arachniodes denticulata* (Sw.) Ching; MO. [4/?]; 7,000–8,000 ft.; highest mountains around Colonia Tovar (n).

171. *Polystichum* sp., aff. *polyphyllum* (C. Presl) C. Presl; US; mixed with *Polypodium* sp. [3/?]; 8,200 ft.; highest mountains E of Colonia [Tovar], in an open glade (n).

172. *Polystichum muricatum* (L.) Fée; US—2. [2/?]; 6,500 ft.; Colonia Tovar (n).

173. *Polystichum* sp.; YU; cited by Eaton (1861) as *Aspidium moritzianum* Klotzsch [possibly *P. muri-*

*catum* (L.) Fée]. [2/?]; 6,500 ft.; Colonia Tovar (n).

174. *Polystichum muricatum* (L.) Fée; US. [2/?]; 7,000 ft.; Colonia Tovar (n).

175. *Polystichum platyphyllum* (Willd.) C. Presl; YU; cited by Eaton (1861) as *Phegopteris platyphylla* (Willd.) Mett. [3/?]; 6,500 ft.; Colonia Tovar (n).

176. *Thelypteris (Amauropelta) concinna* (Willd.) Ching, vel aff.; CU, G, GH, MO, US. [2/?]; 2,500–3,000 ft.; Biscaina and Hacienda Carisal S of Colonia Tovar (n).

177. *Thelypteris (Amauropelta) opposita* (Vahl) Ching; MO, US, YU. [2/7]; 3,200 ft.; Caracas (n).

178. *Thelypteris (Amauropelta) pilosula* (Mett.) R. Tryon; GH, MO, US, YU. [3/15]; 7,000 ft.; Colonia Tovar (n).

179. *Thelypteris (Amauropelta) concinna* (Willd.) Ching; MO, YU—3. [2/20]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

179. *Thelypteris (Amauropelta) oligocarpa* (Humb. & Bonpl. ex Willd.) Ching; MO.

180. *Thelypteris (Amauropelta) pilosula* (Mett.) R. Tryon; GH, MO, YU. [9/16]; 6,000–6,500 ft.; Colonia Tovar (n).

181. *Thelypteris (Amauropelta) scalaris* (Christ) Alston; GH, MO, US. [3/7]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

181. *Thelypteris (Amauropelta) oligocarpa* (Humb. & Bonpl. ex Willd.) Ching; YU.

182. *Thelypteris (Amauropelta) opposita* (Vahl) Ching, vel aff.; MO, US, YU. [4/13]; 2,000–4,000 ft.; lower valleys S of Colonia [Tovar], also between Caracas and La Guayra (n).

183. *Thelypteris (Amauropelta) pilosula* (Mett.) R. Tryon; YU. 24/6/55 [1/1]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

184. *Thelypteris (Amauropelta) pilosula* (Mett.) R. Tryon; YU. 13/10/54 [1/1]; 6,500 ft.; San Carlos River valley near Colonia [Tovar] (n).

185. *Thelypteris (Amauropelta) rufis* (Kunze) Proctor & *T. concinna* (Willd.) Ching; MO [*T. rufis* at US]. [4/13]; 5,800 ft.; a few mi. S of Colonia Tovar in wet places of savannah (n).

ad 185. *Thelypteris (Amauropelta) rufis* (Kunze) Proctor; YU. 1/6/54 [1/?] (s).

185. *Thelypteris (Amauropelta) proctorii* A. R. Smith & Lellinger?; YU.

186. *Thelypteris (Amauropelta) deflexa* (C. Presl) R. Tryon; B, G, GH, MO—3, P, YU. [3/20]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

187. *Thelypteris (Amauropelta) rufis* (Kunze) Proctor; YU—2. 27/8/55 [1/4]; 6,500 ft.; a few mi. W of Colonia Tovar (n).

187. *Thelypteris (Amauropelta) cheilanthesoides* (Kunze) Proctor; GH.

187. *Thelypteris (Amauropelta) pachyrhachis* (Kunze ex Mett.) Ching var. *pachyrhachis*; GH.

188. *Thelypteris (Cyclosorus) grandis* A. R. Smith var. *aequatorialis* (C. Chr.) A. R. Smith; MO, YU—2. [4/9]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

189. *Thelypteris (Cyclosorus) patens* (Sw.) Small var. *patens*; MO, YU. [3/10]; 3,000 ft.; river valleys near Caracas, also Biscaina S of Colonia [Tovar] (n).

190. *Thelypteris (Cyclosorus) patens* (Sw.) Small var. *scabriuscula* (C. Presl) A. R. Smith; MO, YU—2.

25/10/54 [1/6]; 3,600 ft.; a few mi. SW of Colonia Tovar (n).

191. *Thelypteris (Cyclosorus) hispidula* (Decne.) Reed; YU. [3/4]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

192. *Thelypteris (Cyclosorus) patens* (Sw.) Small var. *patens*; MO, YU. 20/2/54 [1/6]; 3,200 ft.; near Caracas (n).

193. *Thelypteris (Goniopteris) gemmulifera* (Hieron.) A. R. Smith; GH, MO, NY, YU. [2/3]; 3,000 ft.; a few mi. S of Colonia [Tovar], also seaside of mountains between Maracai and Choroni (n).

193γ. *Thelypteris (Goniopteris) gemmulifera* (Hieron.) A. R. Smith; YU. [3/6] (s).

194. *Ctenitis nigrovenia* (Christ) Copel.; MO, US, YU. [3/16]; 4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

195. *Ctenitis submarginalis* (Langsd. & Fischer) Ching; YU. [3/1]; 3,200 ft.; Maya River, a few mi. S of Colonia [Tovar] (n).

196. *Thelypteris (Goniopteris) tetragona* (Sw.) Small; GH, MO, YU. [3/9]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

197. *Ctenitis submarginalis* (Langsd. & Fischer) Ching; MO, US, YU—2. [2/16]; 3,200 ft.; valley of Maya, a few mi. S of Colonia [Tovar] (n).

198. *Stigmatopteris nephrodioides* (Klotzsch) C. Chr.; MO, US, YU—2. 29/8/54 [1/30]; 5,600 ft.; River Tuy below Colonia Tovar (n).

199. *Thelypteris (Goniopteris) poiteana* (Bory) Proctor; GH, MO, YU. [2/6]; 2,000 ft.; Piedernales, also between Caracas and La Guayra (n).

200. *Thelypteris (Goniopteris) pennata* (Poiret in Lam.) C. Morton; YU. 3,000–5,000 ft.; River Tuy below Colonia Tovar, also between Caracas and La Guayra (n); [2/2] (s).

201. *Thelypteris (Goniopteris) asterothrix* (Fée) Proctor; GH, MO—2, YU. 19/12/54 [1/22]; 3,200 ft.; Maya River a few mi. S of Colonia Tovar (n).

202. *Ctenitis subincisa* (Willd.) Ching; MO—3, YU—3. [8/20]; 6,000 ft.; Colonia Tovar (n).

203. *Ctenitis sloanei* (Sprengel) C. Morton; YU—2. 5/1/55 [1/1]; Piedernales near Güigüe (n).

204. *Ctenitis ampla* (Humb. & Bonpl. ex Willd.) Ching; MO, US—2, YU. [4/6]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

205. *Lastreopsis effusa* (Sw.) Tindale subsp. *divergens* (Willd.) Tindale; MO, YU—2. [3/20]; 3,000–4,000 ft.; a few mi. SW of Colonia Tovar (n).

206. *Thelypteris (Amauropelta) pteroidea* (Klotzsch) R. Tryon; CU, GH, MO, US, YU—3. [5/12]; 7,500 ft.; 9 mi. E of Colonia Tovar (n).

207. *Grammitis phlegmaria* (J. Smith) Proctor; YU. [2/4] 6/5/58; 7,000–8,000 ft.; Colonia Tovar (n).

208. *Grammitis alfarii* (J. D. Smith) C. Morton; MO, YU; these are ISOSYNTYPES of *Polypodium oligosorum* Mett. ex Kuhn, Linnaea 36: 132. 1869 (non Klotzsch, 1847). [4/21]; 7,000–8,000 ft.; highest mountains E of Colonia Tovar, also between Maracai and Choroni (n). Specimens at MO and YU mixed with *G. senilis* (Fée) C. Morton.

209. *Grammitis senilis* (Fée) C. Morton; MO, US, YU, cited by Copeland (1955) as *Ctenopteris senilis* (Fée) Copel. [9/20]; 8,000 ft.; highest mountains around Colonia Tovar (n).

210. *Grammitis cultrata* (Willd.) Proctor; US, YU. [9/20]; 7,000–8,000 ft.; highest mountains around Colonia Tovar (n).

211. *Grammitis truncicola* (Klotzsch) C. Morton; MO, US—2, YU. [13/20]; 7,000–8,000 ft.; highest mountains around Colonia Tovar and W to Valencia (n).

211β. *Grammitis* sp.; YU; cited by Eaton (1861) as *Polypodium truncicola* Klotzsch.

211. pt. *Grammitis trichomanoides* (Sw.) Ching; US.

212. *Grammitis concinna* A. R. Smith, nom. nov.; GH, MO, YU; ISOTYPES of *Polypodium concinnum* Mett. ex Kuhn, Linnaea 36: 132. 1869 (non Willd., 1810). 25/6/54 [1/8]; 7,500 ft.; high mountains E of Colonia Tovar (n).

213. *Grammitis chrysleri* (Copel.) Proctor; MO, US, YU. [10/20]; 6,500 ft.; Colonia Tovar (n).

213β. *Grammitis asplenifolia* (L.) Proctor; YU. 6/5/58 [1/8] (s).

214. *Polypodium moritzianum* Link; MO, US, YU—2. [9/30]; 6,000–7,000 ft.; Colonia Tovar (n).

215. *Grammitis fendleri* (Copel.) Lellinger; MO, US, YU; these are ISOSYNTYPES of *Polypodium radicale* Moritz ex Hieron., Bot. Jahrb. Syst. 34: 511. 1904 (non Baker, 1867). Cited by Copeland (1955). [7/20]; 6,000–8,000 ft.; Colonia Tovar (n).

216. *Grammitis longisetulosa* (Copel.) C. Morton; MO, US, YU. [3/20]; 6,000–7,000 ft.; Colonia Tovar (n).

217. *Grammitis firma* (J. Smith) C. Morton; MO, YU. [6/20]; 6,000–7,000 ft.; Colonia Tovar (n).

218. *Grammitis apiculata* (Kunze ex Klotzsch) Seymour; MO, US, YU; cited by Copeland (1955) as *Ctenopteris apiculata* (Kunze) Copel. [9/20]; 6,000–7,000 ft.; Colonia Tovar (n).

219. *Grammitis xiphopteroides* (Liebm.) A. R. Smith; MO, YU; cited by Copeland (1955) as *Ctenopteris pilosissima* (Mart. & Gal.) Copel. [14/20]; 6,000–8,000 ft.; Colonia Tovar (n).

220. *Polypodium consimile* Mett. var. *consimile*; B, GH, MO, US, YU; cited by Evans (1969). [6/20]; 6,500 ft.; Colonia Tovar (n).

220β. *Polypodium consimile* Mett. var. *consimile*; GH, MO, US, YU; cited by Evans (1969).

221. *Polypodium eurybasis* C. Chr. var. *eurybasis*; MO, YU; det. ME at MO. At YU there are also specimens of *P. plumula* Humb. & Bonpl. ex Willd. and *P. dispersum* A. M. Evans on the same sheet. [12/20]; 6,000–8,000 ft.; Colonia Tovar (n).

221β. *Polypodium eurybasis* C. Chr.; YU. [8/13] (s).

221γ. *Polypodium camptophyllum* Fée var. *lachniferum* (Hieron.) A. M. Evans; YU. 19/9/55 [1/1] (s).

221δ. *Polypodium* sp.; YU; cited by Eaton (1861) as *P. paradiseae* Langsd. & Fischer.

222. *Niphidium mortonianum* Lellinger; MO, YU; det. DL. [6/18]; 6,000–8,000 ft.; Colonia Tovar (n).

223. *Niphidium crassifolium* (L.) Lellinger; MO, YU; det. DL. [2/11]; 3,500–4,000 ft.; a few mi. SW of Colonia Tovar (n).

224. *Campyloneurum angustifolium* (Sw.) Fée; YU; det. DL. 5/6/55 [1/5]; 7,000–8,000 ft.; highest mountains E of Colonia Tovar, also between Maracai and Choroni (n).

224. *Campyloneurum chlorolepis* Alston; YU. 29/1/57 [1/1] (s).

225. *Campyloneurum chlorolepis* Alston; MO, YU. 3/7/55 [1/6]; 5,000 ft.; a few mi. S of Colonia Tovar (n).

226. *Campyloneurum amphostenon* (Kunze ex Klotzsch)

Fée; MO, YU. [13/20]; 7,000–8,000 ft.; a few mi. W of Colonia Tovar (n).

ad 226. *Campyloneurum amphostenon* (Kunze ex Klotzsch) Fée; YU; det. DL. [2/1]; highest mountains (s).

227. *Campyloneurum phyllitidis* (L.) C. Presl; MO, YU. [6/21]; 2,000–4,000 ft.; a few mi. SW of Colonia Tovar, also between Caracas and La Guayra, Piedernales (n).

228. *Campyloneurum chrysopodium* (Klotzsch) Fée; det. DL; MO—2, YU; these are ISOTYPES of *Campyloneurum fendleri* T. Moore, Ind. Fil. 224. 1861. 5/10/54 [1/19]; 5,500 ft.; seaside of mountains north of Colonia Tovar (n).

228β. *Campyloneurum chrysopodium* (Klotzsch) Fée; det. DL; MO, YU. 7/3/57 [1/6] (s).

229. *Campyloneurum repens* (Aubl.) C. Presl; MO, YU; det. DL. [2/10]; 5,500 ft.; seaside of mountains N of Colonia Tovar (n).

230. *Campyloneurum repens* (Aubl.) C. Presl; MO, YU; det. DL. [5/20]; 6,000 ft.; seaside of mountains N of Colonia Tovar (n).

231. *Campyloneurum decurrens* (Raddi) C. Presl; YU; det. DL. [3/4]; 5,000 ft.; seaside of mountains N of Colonia Tovar (n).

232. *Thelypteris (Meniscium) salzmannii* (Fée) C. Morton; GH, K, MO, YU—2; cited by Maxon & Morton (1938) as *Dryopteris ensiformis* C. Chr., in part [= *Thelypteris ensiformis* (C. Chr.) R. Tryon]. [2/14]; 4,000 ft.; Piedernales, also seaside of mountains between Valencia and San Estevan (n). One collection at YU contains both species.

232β. *Thelypteris (Meniscium) arborescens* (Humb. & Bonpl. ex Willd.) C. Morton; YU. [?/1].

233. *Phanerophlebia juglandifolia* (Humb. & Bonpl. ex Willd.) J. Smith; US, YU. [5/23]; 5,500 ft.; Tuy River valley below Colonia Tovar (n).

234. *Polypodium fraxinifolium* Jacq.; YU. 18/10/54 [1/1]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

235. *Polypodium fraxinifolium* Jacq.; MO, YU. 24/6/55 [1/20]; 7,000 ft.; high mountains around Colonia Tovar (n).

236. *Polypodium fraxinifolium* Jacq.; YU; cited by Eaton (1861). 28/9/55 [1/?]; 7,000 ft.; seaside of mountains N of Colonia Tovar (n).

237. *Polypodium* aff. *fraxinifolium* Jacq.; YU. With acicular, spreading rhizome scales. 19/12/54 [1/3]; 6,000 ft. a few mi. S of Colonia Tovar (n). "Rhizome very different from no. 236" (s).

238. *Polypodium dissimile* L.; YU. [2/3]; 4,000–5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

238β. *Polypodium dissimile* L.; YU. [?/1]. Mounted on same sheet as 238.

239. *Polypodium* sp.; YU; cited by Eaton (1861) as *P. latipes* Langsd. & Fischer. 15/7/54 [1/?]; 4,000 ft.; a few mi. SW of Colonia Tovar (n).

240. *Polypodium sessilifolium* Desv.; MO, YU. [6/10]; 7,000–8,000 ft.; high mountains around Colonia Tovar (n).

241. *Polypodium (Phlebodium) pseudoaureum* Cav.; MO, YU—2. [10/18]; 5,000–7,000 ft.; a few mi. S and SW of Colonia Tovar (n).

242. *Polypodium fuscopetiolatum* A. R. Smith; MO—2, YU—2. [2/23]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

243. *Polypodium funckii* Mett.; US—2, YU. [2/14]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

243?. *Polypodium* sp.; YU; cited by Eaton (1861) as *P. loriceum* L.

244. *Polypodium lasiopus* Klotzsch; MO, US, YU. [10/21]; 6,000–7,000 ft.; a few mi. S of Colonia Tovar (n).

245. *Polypodium remotum* Desv.; MO, US, YU. [6/17]; 6,200 ft.; Colonia Tovar (n).

246. *Polypodium buchtienii* Christ & Rosenstock; YU. [2/4]; 7,000–8,000 ft.; high mountains around Colonia Tovar (n).

247. *Polypodium steirolepis* C. Chr.; MO, NY, US, YU. ISOTYPES of *P. nigripes* Hook., Sp. Fil. 5: 17. 1863 (non Hassk., 1844). [5/17]; 3,500 ft.; a few mi. S and SW of Colonia Tovar (n).

248. *Microgramma vacciniifolia* (Langsd. & Fischer) Copel.; MO, YU. [2/6]; 1,000 ft.; seaside of mountains near San Estevan, also between Caracas and La Guayra (n).

249. *Pleopeltis macrocarpa* (Bory ex Willd.) Kaulf.; YU. 27/8/55 [1/4]; 6,500 ft.; a few mi. W of Colonia Tovar (n).

250. *Pleopeltis macrocarpa* (Bory ex Willd.) Kaulf.; MO, YU. [14/23]; 7,000 ft.; Colonia Tovar (n).

251. × *Pleopodium leucosporum* (Klotzsch) Mickel & Beitel [*Pleopeltis macrocarpa* (Bory ex Willd.) Kaulf. × *Polypodium thyrsanolepis* A. Braun ex Klotzsch]; MO, US, YU. 23/2/54 [1/?]; 4,000 ft.; mountains N of Caracas (n).

252. *Polypodium thyrsanolepis* A. Braun ex Klotzsch; MO, YU. [4/20]; 3,000–4,000 ft.; valley of Macarao W of Caracas (n).

253. *Polypodium polypodioides* (L.) Watt var. *burchellii* (Baker) Weath.; MO, YU. [6/20]; 3,000–4,000 ft.; a few mi. S and SW of Colonia Tovar (n).

254. *Polypodium ursipes* Moritz ex C. Chr.; MO, US; these are ISOSYNTYPES of *P. ambiguum* Mett. ex Kuhn, Linnaea 36: 134. 1869 (non Desv., 1827). [3/?]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

255. *Grammitis jamesonii* (Hook.) C. Morton; US, YU. 7,000–8,000 ft.; Colonia Tovar (n); [5/20] (s). On same sheet as 356 at YU.

256. *Grammitis leptopoda* (C. H. Wright) Copel.; MO, US. [2/?]; 7,000 ft.; Colonia Tovar (n).

257. *Grammitis jungermannioides* (Klotzsch) Ching; YU; cited by Eaton (1861) as *Polypodium jungermannioides* Klotzsch. [2/?]; 6,800 ft.; Colonia Tovar (n).

258. *Vittaria graminifolia* Kaulf.; MO, YU. [9/20]; 6,700 ft.; Colonia Tovar (n).

258. *Selaginella viticulosa* Klotzsch; NY; cited by Alston et al. (1981); erroneous citation?

259. *Vittaria moritziana* Mett. + *V. stipitata* Kunze; MO, YU. [6/19]; 6,000–7,000 ft.; Colonia Tovar (n).

259β. *Vittaria gardneriana* Fée; MO, YU. 6,000 ft. (n); [2/17] (s).

260. *Vittaria remota* Fée; MO, YU. [2/20]; 7,000 ft.; Colonia Tovar (n).

261. *Polybotrya serratifolia* (Fée) Klotzsch; MO—2, YU; det. RM. [5/17]; 6,000 ft.; Colonia Tovar (n).

262. *Polybotrya canaliculata* Klotzsch; MO—2, YU—

3; det. RM. [2/10 + 9]; 5,000 ft.; seaside of mountain range opposite the Colony [Tovar] (n).

263. *Elaphoglossum peltatum* (Sw.) Urban forma *flabellatum* (Humb. & Bonpl. ex Willd.) Mickel; MO, YU. [4/19]; 6,000 ft.; River Tuy below Colony (n).

264. *Elaphoglossum erinaceum* (Fée) T. Moore; MO, YU; det. JM. [6/5]; 5,000–6,000 ft.; Tuy valley below Colonia [Tovar] (n).

265. *Elaphoglossum eximum* (Mett.) Christ; GH, MO—2, PH, YU; these are ISOSYNTYPES of *Acrostichum reichenbachii* Moritz ex Kuhn, Linnaea 36: 42. 1869. [3/20]; 7,200 ft.; headwaters of San Carlos River (n).

266. *Elaphoglossum moritzianum* (Klotzsch) T. Moore; GH, MO, NY, PH, US, YU; det. JM. [6/20]; 5,900 ft.; valley of the Tuy River, below Colonia [Tovar] on rocks (n).

267. *Elaphoglossum piloselloides* (C. Presl) T. Moore; GH, MO, US, YU; det. JM. 19/9/55 [1/17]; 6,600 ft., San Carlos valley in a cave in rocks in the savannah (n).

268. *Elaphoglossum hieracioides* Mickel; HOLOTYPE, US; ISOTYPES, GH, MO, YU. [9/20]; 6,500 ft.; San Carlos valley (n).

269. *Elaphoglossum meridense* (Klotzsch) T. Moore; MO, NY, YU; det. JM. [9/20]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

269 $\beta$ . *Elaphoglossum deorsum* (Karsten) Vareschi; MO; det. JM.

270. *Elaphoglossum bellermannianum* (Klotzsch) T. Moore; MO, NY, US, YU; det. JM. [7/21]; 6,500–7,000 ft.; mountain range S of Colonia [Tovar].

271. *Elaphoglossum cuspidatum* (Willd.) T. Moore; MO, NY, YU; det. JM. [4/20]; 6,300 ft.; mountains S of Colonia [Tovar] (n).

272. *Elaphoglossum tenuiculum* (Fée) T. Moore; P; this is the HOLOTYPE of *Acrostichum tenuiculum* Fée, Mém. Fam. Foug. 10: 6, t. 2, f. 2. 1865. ISOTYPE, YU. [2/18]; 6,600 ft.; 7 mi. SW of Colonia [Tovar] between rocks in savannahs (n).

273. *Elaphoglossum tectum* (Humb. & Bonpl. ex Willd.) T. Moore; MO, YU; det. JM. [5/23]; 6,500 ft.; Colonia Tovar (n).

ad 273. *Elaphoglossum tectum* (Humb. & Bonpl. ex Willd.) T. Moore; YU. 3/7/55 [1/1] (s).

274. *Elaphoglossum tectum* (Humb. & Bonpl. ex Willd.) T. Moore; YU. 27/8/55 [1/3]; 6,600 ft.; 7 mi. SW of Colonia [Tovar] (n).

275. *Elaphoglossum succubus* Mickel; HOLOTYPE, NY; ISOTYPES, MO, US. [5/21]; 6,000 ft.; Maya valley near Colonia [Tovar] (n).

275 $\alpha$ . *Elaphoglossum affine* (Mart. & Gal.) T. Moore; MO, not seen; cited by Mickel in Smith (1985).

276. *Elaphoglossum huassaro* (Ruiz) Christ; MO, US; det. JM. [3/?]; 6,000 ft.; mountain range S of Colonia [Tovar], in wet ground full of springs (n).

277. *Elaphoglossum* sp.; YU; cited by Eaton (1861) as *Acrostichum leptophyllum* Fée. 23/8/55 [1/?]; 7,500 ft.; Lagunassa, 12 mi. E of Colonia [Tovar] (n).

278. *Elaphoglossum chrysopogon* Mickel; MO, YU; det. JM. [2/14]; 6,900 ft.; 6 mi. SE of Colonia [Tovar] (n).

279. *Elaphoglossum chrysopogon* Mickel; HOLOTYPE, NY; ISOTYPE, NY. [3/8]; 6,700 ft.; Lagunita, 6 mi. SW of Colonia [Tovar], between rocks (n).

280. *Elaphoglossum burchellii* (Baker) C. Chr.; MO, YU; det. JM. these are ISOSYNTYPES of *Elaphoglossum xanthoneuron* Christ. [5/20]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

281. *Elaphoglossum eximum* (Mett.) Christ; MO, YU; det. JM. [4/20]; 6,800 ft.; headwaters of San Carlos River, 3 mi. W of Colonia [Tovar].

282. *Elaphoglossum brachyneuron* (Fée) J. Smith; GH, MO, NY, US, YU; det. JM. [2/20]; 6,500 ft.; mountain range S of Colonia [Tovar] (n).

283. *Elaphoglossum ambiguum* (Mett. ex Christ) Alston; MO, US, YU—2; these are ISOTYPES of *Acrostichum ambiguum* Mett. ex Christ, Neue Denkschr. Allg. Schweiz. Ges. Gesammten Naturwiss. 36: 60. 1899. [5/20]; 6,400 ft.; Colonia [Tovar] (n).

284. *Elaphoglossum ambiguum* (Mett. ex Christ) Alston; MO, YU—2; det. JM. 28/9/54 [1/11]; 6,000–7,000 ft.; seaside of mountain range near Colonia [Tovar] (n).

285. *Elaphoglossum lingua* (C. Presl) Brackenr.; MO, US, YU; det. JM. [2/6]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

286. *Elaphoglossum lloense* (Hook.) T. Moore; MO, NY, YU; det. JM. [7/20]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

287. *Elaphoglossum macrophyllum* (Klotzsch) Christ; MO, NY, YU; det. JM. [3/12], 6,300 ft.; mountain range S of Colonia [Tovar].

288. *Elaphoglossum sellowianum* (Klotzsch ex Kuhn) C. Chr.; YU. [3/1]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

289. Not located, most likely an *Elaphoglossum*. 27/9/55 [1/?]; 6,800 ft.; Colonia Tovar, plant easily drying, somewhat viscose, sticking to the paper, sterile (n).

290. *Elaphoglossum hoffmannii* (Mett. ex Kuhn) Christ; BM, MO, NY, US, YU; these are ISOSYNTYPES of *Acrostichum attenuatum* Kunze ex Kuhn, Linnaea 36: 56. 1869 (non Fée, 1853). [4/20]; 6,300 ft.; mountains S of Colonia [Tovar], on trunks of trees and upon the ground (n).

291. *Elaphoglossum sporadolepis* (Kunze ex Kuhn) C. Chr.; YU. 2/10/54 [1/1]; 6,300 ft.; mountains S of Colonia [Tovar] (n).

292. *Elaphoglossum tovarensense* (Moritz ex Kuhn) T. Moore; BM, MO, NY, US, YU; these are ISOSYNTYPES of *Acrostichum tovarensense* Moritz ex Kuhn, Linnaea 36: 60. 1869. [4/20]; 6,300 ft.; mountain range S of Colonia [Tovar], upon the ground (n).

293. *Elaphoglossum sporadolepis* (Kunze ex Kuhn) C. Chr.; MO—2, YU; these are ISOSYNTYPES of *Acrostichum corpulentum* Kunze ex Kuhn, Linnaea 36: 61. 1869. [3/20]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

293. *Elaphoglossum andicola* (Fée) T. Moore; NY; cited by Mickel in Smith (1985).

294. *Elaphoglossum sporadolepis* (Kunze ex Kuhn) C. Chr.; MO, NY, US, YU; these are ISOLECTOTYPES of *Acrostichum sporadolepis* Kunze ex Kuhn, Linnaea 36: 59. 1869. [5/21]; 6,300 ft.; mountain range S of Colonia [Tovar] (n).

294, pt. *Elaphoglossum sporadolepis* (Kunze ex Kuhn) C. Chr.; B, YU; the former is the HOLOTYPE of *Acrostichum compactum* Mett. ex Kuhn, Linnaea 36: 59. 1869; cited by Mickel in Smith (1985).

295. *Elaphoglossum sellowianum* (Klotzsch ex Kuhn)

C. Chr.; US, YU; these are ISOSYNTYPES of *Acrostichum sellowianum* Klotzsch ex Kuhn, Linnaea 36: 52. 1869. [10/22]; 6,400 ft.; Colonia Tovar (n).

295α, pt. *Elaphoglossum tenuiculum* (Fée) T. Moore; MO, not seen; cited by Mickel in Smith (1985).

295β. *Elaphoglossum sellowianum* (Klotzsch ex Kuhn) Christ; YU; this is an ISOSYNTYPE of *Acrostichum sellowianum* Klotzsch ex Kuhn, Linnaea 36: 52. 1869. [4/16] (s).

296. *Elaphoglossum sporadolepis* (Kunze ex Kuhn) C. Chr.; MO, YU; these are ISOSYNTYPES of *Acrostichum sporadolepis* Kunze ex Kuhn, Linnaea 36: 59. 1869; det. JM. [3/8]; 6,300 ft.; mountains S of Colonia [Tovar].

297. *Pityrogramma trifoliata* (L.) R. Tryon; MO, YU. [2/19]; 3,000–4,000 ft.; warmer parts of river valleys, not far from the water (n).

298. *Pityrogramma calomelanos* (L.) Link; MO, US; these are ISOTYPES of *P. calomelanos* var. *venezuelae* Domin., Rozpr. Ceské Akad. Věd, Tř. 2, Vědy Mat. Přír., II. 51(18): 12. 1941. [2/?]; 3,000 ft.; between Caracas and La Guayra (n).

299. *Pityrogramma tartarea* (Cav.) Maxon; MO, YU—3. [10/20]; 6,300 ft., Colonia Tovar (n).

300. *Eriosorus flexuosus* (H.B.K.) Copel. var. *flexuosus*; G, GH, K, MO, P, US, YU; cited by A. Tryon (1970). [3/13]; 7,400 ft.; 12 mi. E of Colonia [Tovar] (n).

301. *Eriosorus hirtus* (H.B.K.) Copel. var. *hirtus*; B, BM, F, G, GH, K, MO—2, NY, YU—2; cited by A. Tryon (1970). [10/20]; 7,000 ft.; a few mi. W of Colonia [Tovar].

302. *Hemionitis rufa* (L.) Sw.; YU; cited by Eaton (1861) as *Gymnogramme rufa* Desv. 2,500 ft.; Piedernales, a little S of the lake of Valencia (n).

303. *Hemionitis palmata* L.; YU. [2/18]; 2,500–3,000 ft.; Piedernales, a little S of the lake of Valencia, [also] between La Guayra and Caracas (n).

304. *Antrophyum lineatum* (Sw.) Kaulf.; MO, YU. [12/20]; 6,000–7,000 ft.; Colonia Tovar (n).

305. *Antrophyum cajenense* (Desv.) Sprengel; MO, YU. Mixed on same sheet with *Antrophyum brasiliense* (Desv.) C. Chr. at YU. [3/23]; 6,000–7,000 ft.; Colonia Tovar, near Tuy River (n).

306. *Thelypteris (Amauropelta) aspidioides* (Willd.) R. Tryon; G, MO, US, YU. [4/13]; 5,600 ft.; Tuy River below Colonia [Tovar]; San Carlos River (n).

307. *Thelypteris (Amauropelta) rupestris* (Klotzsch) Reed; GH, MO, US. [2/?]; Colonia Tovar (n).

308. *Blechnum fragile* (Liebm.) C. Morton & Lellinger, vel aff.; MO. [3/?]; 7,800 ft.; 12 mi. E of Colonia [Tovar] (n).

309. *Blechnum divergens* (Kunze) Mett.; MO. [3/?]; 6,000–7,000 ft.; Colonia Tovar (n).

310. *Blechnum lehmannii* Hieron.; MO. [3/?]; 6,000–7,000 ft.; Colonia Tovar (n).

311. *Bolbitis serratifolia* (Mertens ex Kaulf.) Schott; BM, BR, G, K, MO, P, US, YU; cited by Hennipman (1977). [2/20]; 4,000 ft.; valley of San Carlos, SW of Colonia [Tovar] (n).

312. *Ophioglossum reticulatum* L.; MO. [3/?]; 6,500 ft.; several mi. SW of Colonia [Tovar].

313. *Lycopodium thyoides* Humb. & Bonpl. ex Willd.; MO, YU—2. [4/22]; 6,500–7,500 ft.; a few mi. S of Colonia Tovar (n).

314. *Lycopodium clavatum* L.; MO, YU. [4/12]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

314β. *Lycopodium clavatum* L.; YU. 19/7/56 [1/2]; 7,000 ft. (s).

315. *Lycopodium alopecuroides* L.; YU. [2/17]; 6,000 ft.; a few mi. S of Colonia Tovar, wet places in the savannah (n).

316. *Lycopodium reflexum* Lam.; MO, YU. [7/20]; 7,000 ft.; a few mi. W of Colonia Tovar (n).

317. *Lycopodium acerosum* Sw.; YU. [2/7]; 3,500 ft.; valley a few mi. SW of Colonia Tovar (n).

318. *Lycopodium cernuum* L.; YU. [2/1]; 7,500 ft.; highest mountains E of Colonia Tovar (n).

319. *Lycopodium taxifolium* Sw.; MO, YU; det. BO. [6/17]; 6,500–8,000 ft.; around Colonia Tovar (n).

320. *Lycopodium myrsinoides* Lam.; MO, YU; det. BO. [3/20]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

321. *Selaginella pallescens* (C. Presl) Spring in Martius; MO, NY, YU. [4/22]; 2,000–4,000 ft.; valleys SW of Colonia Tovar, also La Victoria (n).

321β. *Selaginella pallescens* (C. Presl) Spring; YU. 23/8/56 [1/1]; 2,000 ft.; [La] Victoria (s).

322. *Selaginella viticulosa* Klotzsch; MO, YU. 16/8/55 [1/18]; 2,500 ft.; seaside of mountains between Caracas and La Guayra (n).

322. *Selaginella cavifolia* A. Braun; BM; this is an ISOSYNTYPE of *S. moritziana* var. *elongata* A. Braun, Ann. Sci. Nat. Bot., V. 3: 285. 1865; cited by Alston et al. (1981).

323. *Selaginella cavifolia* A. Braun; MO, YU; these are ISOSYNTYPES of *S. moritziana* var. *elongata* A. Braun, Ann. Sci. Nat. Bot., V. 3: 285. 1865. [4/17]; 7,000 ft.; high mountains around Colonia Tovar (n).

324. *Selaginella flagellata* Spring; BM, MO, YU; these are ISOSYNTYPES of *S. ambigua* A. Braun, Ann. Sci. Nat. Bot., V. 3: 286. 1865; cited by Alston et al. (1981). [2/22]; 2,300 ft.; La Victoria and Piedernales (n).

324, pt. *Selaginella cladorrhizans* A. Braun, Ann. Sci. Nat. Bot., V. 3: 282. 1865; SYNTYPES, B, BM, YU; cited by Alston et al. (1981). At YU, this species and *S. flagellata* are mixed on the same sheet.

325. *Plagiogyria semicordata* (C. Presl) Christ; MO, YU. 23/8/55 [1/18]; 8,000 ft.; highest mountains, 12 mi. E of Colonia [Tovar] (n).

326. *Asplenium oligophyllum* Kaulf.; MO, US, YU. 3,500 ft.; a few mi. SW of Colonia Tovar, river bottom (n); 17/5/55 [1/26] (s).

327. *Hymenophyllum (Sphaerocionium) trichophyllum* H.B.K.; GH; YU cited by Morton (1947). 25/8/56 [1/20]; 8,000 ft.; 10 mi. E of Colonia [Tovar], highest mountains (n); Lagunassa (s).

328. *Hymenophyllum (Sphaerocionium) lanatum* Fée; YU. 12/7/56 [1/8]; 7,500 ft.; a few mi. W of Colonia [Tovar] (n).

ad 328. *Hymenophyllum (Sphaerocionium) lanatum* Fée; YU. 12/7/56 [1/10]; high mountains, La Victoria pass (s).

329. *Trichomanes (Acarpacium) polypodioides* L.; MO, US, YU—2. [2/20]; 6,500–7,000 ft.; seaside of mountains north of Colonia Tovar (n).

330. *Lastreopsis exulta* (Mett.) Tindale; MO. 28/6/56, 8/1/57 [2/?]; 6,000 ft.; Colonia Tovar (n).

331. *Asplenium salicifolium* L.; YU—2. 12/7/56 [1/?]; 6,000–7,000 ft.; Colonia Tovar (n).

331 $\beta$ . *Asplenium auriculatum* Sw.; YU. 22/4/58 [1/?] (s).

332. *Asplenium serra* Langsd. & Fischer; YU—2. [?/2]; 7,000–8,000 ft.; Colonia Tovar (n). "Has been mixed up with no. 155, but pinnae very different; also the meshes of veinlets in the scales of rhizome smaller" (s).

333. *Asplenium serra* Langsd. & Fischer; YU. 22/1/56 [1/3]; 7,000 ft.; seaside of mountains N of Colonia [Tovar] (n).

334. *Diplazium macrophyllum* Desv.; YU—2. [2/1]; 6,000 ft.; seaside of mountains N of Colonia [Tovar], also between Valencia and San Estevan (n).

335. *Lomariopsis fendleri* D. Eaton, Mem. Amer. Acad. Arts, n.s. 8: 195. 1861; SYNTYPES, YU—3 sheets, collected on two different dates; ISOSYNTYPE, K. [2/16]; 6,000 ft.; seaside of mountain range between Colonia [Tovar] and Chichiribichi (n).

ad 335. *Lomariopsis fendleri* D. Eaton; YU. 22/1/56 [1/?] (s).

336. *Bolbitis portoricensis* (Sprengel) Hennipman; MO, YU—2; cited by Hennipman (1977). One collection at YU mixed with juveniles of *Pteris altissima* Poiret in Lam. 29/1/57 [1/13]; 3,500 ft.; seaside of mountain range between Maracai and Choroni (n).

337. Not located, *Lycopodium* (n). 17/7/56 [1/?]; 7,500 ft.; high mountains E of Colonia Tovar, upon trees (n).

338. *Grammitis pilosissima* (Mart. & Gal.) C. Morton; YU. 12/7/56 [1/1]; 7,500 ft.; Colonia Tovar (n).

339. Not located, no data in notebook.

340. *Blechnum schomburgkii* (Klotzsch) C. Chr.; MO. [3/7]; 7,000–8,000 ft.; Petaquire mountains, also highest mountains E of Colonia [Tovar] (n).

341. *Polypodium fuscopetiolum* A. R. Smith; YU. 26/5/54 [1/1]; 3,500 ft.; Biscaina, S of Colonia [Tovar] (n).

342. *Ophioglossum nudicaule* L. f.; MO. 5,000 ft.; a few mi. S of Colonia [Tovar], beneath low shrubs at margin of woods (n).

343. *Polypodium bolivari* Sota; YU. 3/9/56 [1/3]; 5,000 ft.; a few mi. S of Colonia Tovar (n); near Maya (s).

344. *Cyathea villosa* Willd.; B; this is the HOLOTYPE of *Alsophila vernicosa* Mett. ex Kuhn, Linnaea 36: 155. 1869; ISOTYPES, GH, MO, YU; cited by Barrington (1978) as *Trichipteris villosa* (Willd.) R. Tryon. 21/8/56 [1/6]; 5,800 ft.; a few mi. S of Colonia [Tovar], in savannahs (n).

345. Not located. 2/9/56; 6,000 ft.; Colonia Tovar (n).

346. Not located. 5,000 ft.; beneath low shrubs, margin of woods, Maya near Colonia [Tovar] (n).

347. *Lycopodium* cf. *pendulinum* Hook.; MO, YU. 21/8/56 [1/21]; 6,000 ft.; a few mi. S of Colonia Tovar in wet places in the savannah (n).

348. *Grammitis* cf. *senilis* (Fée) C. Morton; MO. [2/?]; 7,000 ft.; seaside of mountain range between Maracai and Choroni (n).

349. *Grammitis* aff. *subtilis* (Kunze ex Klotzsch) C. Morton; MO, YU. 12/12/56 [1/7]; 6,500 ft.; seaside of mountain range between Maracai and Choroni (n).

350. *Grammitis* sp.; YU; cited by Eaton (1861) as *Poly-*

*odium pendulum* Sw. 12/12/56; 6,500 ft.; seaside of mountain range between Maracai and Choroni (n).

351. *Grammitis asplenifolia* (L.) Proctor?; YU. Juvenile. 12/12/56 [1/1]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

352. *Polypodium triseriale* Sw.; YU. 25/1/55 [1/1]; 3,500 ft.; Piedernales near Güigüe (n).

353. *Polypodium loriceum* L.; MO, YU—2. [2/3]; 6,000 ft.; seaside of mountains between Maracai and Choroni (n).

354. *Microgramma reptans* (Cav.) A. R. Smith; MO, YU. [2/11] 2,500 ft.; seaside of mountains between Maracai and Choroni (n).

355. *Cochlidium rostratum* (Hook.) Maxon ex C. Chr.; MO. [2/?]; 6,000 ft.; in crossing the mountains from Maracai towards Choroni (n).

356. *Cochlidium serrulatum* (Sw.) L. E. Bishop; MO, YU. [2/20]; 6,000–7,000 ft.; seaside of mountains between Maracai and Choroni, and between Valencia and San Estevan (n).

357?. *Pityrogramma chrysocoma* (Desv.) Maxon ex Domin; YU. [4/?]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

358. *Eriosorus hirtus* (H.B.K.) Copel. var. *hirtus*; GH, YU; cited by A. Tryon (1970). [3/1]; 6,000–7,000 ft.; a few mi. W of Colonia [Tovar] (n).

359. *Eriosorus hispidulus* (Kunze) Vareschi var. *hispidulus*; K, YU; cited by A. Tryon (1970). 12/12/56 [1/3]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

360. *Thelypteris (Amauropelta) aspidioides* (Willd.) R. Tryon; YU. 12/12/56 [1/2]; 2,500 ft.; seaside of mountain range between Maracai and Choroni (n).

361. *Elaphoglossum peltatum* (Sw.) Urban; MO, YU. [3/11]; 7,000 ft.; seaside of mountain range between Maracai and Choroni (n).

362. *Elaphoglossum pusillum* (Mett. ex Kuhn) C. Chr.; GH, NY, PH; these are ISOSYNTYPES of *Acrostichum fraseri* Mett. ex Kuhn, Linnaea 36: 43. 1869. 12/12/56 [1/?]; 2,000 ft.; near Esmeralda above Choroni (n).

363. *Elaphoglossum crinitum* (L.) Christ; YU. [2/2]; 2,500 ft.; seaside of mountain range between Maracai and Choroni (n).

364. *Adiantum tetraphyllum* Humb. & Bonpl. ex Willd.; YU. 12/12/56 [1/3]; 2,000 ft.; seaside of mountain range between Maracai and Choroni (n).

364. *Elaphoglossum pusillum* (Mett. ex Kuhn) C. Chr.; MO; det. JM.

365. *Pteris altissima* Poiret in Lam.; YU. 12/12/56 [1/1]; 2,500 ft.; seaside of mountain range between Maracai and Choroni (n).

366. *Doryopteris sagittifolia* (Raddi) J. Smith; MO, YU. [2/19]; 2,500 ft.; seaside of mountain range between Maracai and Choroni (n).

367. *Asplenium cirrhatum* Rich. ex Willd.; YU. [2/1]; 4,000 ft.; seaside of mountain range between Maracai and Choroni (n).

368. *Asplenium tenerimum* Mett. ex Kuhn, Linnaea 36: 97. 1869; ISOTYPES, MO, NY, US; cited by Morton & Lellinger (1966) as *A. cuspidatum* Lam. var. *tenerimum* (Mett. ex Kuhn) C. Morton & Lellinger. 21/11/56 [1/?]; 2,300 ft.; near La Victoria (n).

369. *Diplazium expansum* Willd.; YU—2. 12/12/56 [1/1]; 4,000 ft.; seaside of mountain range between Maracai and Choroni (n).

370. *Nephrolepis rivularis* (Vahl) Mett. ex Krug; MO, YU. 29/1/57 [1/7]; 5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

371. *Thelypteris (Steiropteris) praetervisa* (Kuhn) A. R. Smith; K, YU; these are ISOTYPES of *Aspidium praetervisum* Kuhn, Linnaea 36: 111. 1869; cited by Smith (1980). 12/12/56 [1/2]; 2,500 ft.; seaside of mountains between Maracai and Choroni (n).

372. *Thelypteris (Steiropteris) fendleri* (D. Eaton) Reed; YU—2; HOLOTYPE of *Aspidium fendleri* D. Eaton, Mem. Amer. Acad. Arts, n.s. 8: 210. 1861; ISOTYPES, B, GH, K; cited by Smith (1980). [2/9]; 2,500 ft.; seaside of mountains between Maracai and Choroni (n).

373. *Thelypteris (Steiropteris) decussata* (L.) Proctor var. *decussata*; MO, YU—2; cited by Smith (1980). [2/8]; 3,000 ft.; seaside of mountains between Choroni and Maracai, also between Valencia and San Estevan (n).

374. *Dennstaedtia obtusifolia* (Willd.) T. Moore; YU. 12/12/56 [1/4]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

375. *Saccoloma inaequale* (Kunze) Mett.; MO, YU—2. [2/9]; 5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

376. *Saccoloma elegans* Kaulf.; YU. 12/12/56 [1/2]; 3,000 ft.; seaside of mountain range between Maracai and Choroni (n).

377. *Lindsaea stricta* (Sw.) Dryander var. *stricta*; B, BR, C, F, G, GH, GOET, K, MO, PH, US, YU; cited by Kramer (1957). [2/22]; 4,000 ft.; seaside of mountain range between Maracai and Choroni (n).

378. *Lindsaea lancea* (L.) Beddome var. *lancea*; MO, YU; this number cited by Kramer (1957) as this species and also as *L. stricta* (Sw.) Dryander var. *stricta*. 12/12/56 [1/18]; 4,500 ft.; seaside of mountain range between Maracai and Choroni (n).

378, pt. *Lindsaea stricta* (Sw.) Dryander var. *stricta*; YU. This sheet is, in part, juvenile material of some other species of *Lindsaea*.

379. = 63β (n & s), which is *Lindsaea klotzschiana* Moritz in Ettingshausen. Without locality data in notebook.

380. *Lindsaea stricta* (Sw.) Dryander var. *stricta*; cited by Kramer (1957). 12/12/56 [1/6]; 5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

380. *Lindsaea klotzschiana* Moritz in Ettingshausen; YU. 12/12/56 [1/?]; 5,000 ft. (s).

381. *Grammitis taxifolia* (L.) Proctor; YU. 30/1/58 [1/1]; 6,500 ft.; seaside of mountains between Agua Blanca and Cumbote (n).

382. *Cyathea gibbosa* (Klotzsch) Domin; YU. 12/12/56 [1/1]; 5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

383. *Cyathea senilis* (Klotzsch) Domin; YU—2. [2/3]; 6,500 ft.; seaside of mountain range between Maracai and Choroni and further west (n).

384. Not located. 29/1/57 [1/?]; 6,000 ft.; seaside of mountains between Maracai and Choroni (n).

385. *Cnemidaria horrida* (L.) C. Presl; MO, YU; cited by Stolze (1974). [3/13]; 2,000–3,000 ft.; seaside of mountain range between Maracai and Choroni, also between Valencia and San Estevan (n).

386. *Cnemidaria karsteniana* (Klotzsch) R. Tryon; MO; cited by Stolze (1974). [3/8]; 5,000 ft.; seaside of mountain range between Maracai and Choroni and further west (n).

387. *Hymenophyllum (Sphaerocionium) lanatum* Fée; GH, MO, YU; cited by Morton (1947). 12/12/56 [1/11]; 6,000 ft.; seaside of mountains between Maracai and Choroni (n).

388. *Trichomanes (Achomanes) crispum* L.; YU. [2/21]; 4,000–5,000 ft.; seaside of mountains between Maracai and Choroni (n).

388β. *Trichomanes (Achomanes)* sp., undescribed? (same as 389); YU. 29/1/57 [1/2] (s).

389. *Trichomanes (Achomanes)* sp., undescribed?; MO, YU. [3/10]; 5,000 ft.; seaside of mountains between Maracai and Choroni (n).

390. *Trichomanes (Neurophyllum) pinnatum* Hedwig; MO, YU. [2/11]; 4,000 ft.; seaside of mountains between Maracai and Choroni (n).

391. *Elaphoglossum glabellum* J. Smith; YU. [2/4]; 7,000 ft.; in crossing mountains from Maracai to Choroni (n).

392. Not located. 12/12/54 [1/?]; 6,500 ft.; Colonia Tovar (n).

393. *Hymenophyllum (Mecodium) apiculatum* Mett. ex Kuhn; YU. 12/12/56 [1/1]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

394. *Hymenophyllum (Mecodium) polyanthos* (Sw.) Sw.; YU. 12/12/56 [1/3]; 6,500 ft.; seaside of mountain range between Maracai and Choroni (n).

395. *Trichomanes (Lacosteopsis) capillaceum* L.; YU. 6,500 ft.; Colonia Tovar, on rocks near a rivulet (n); 4,000 ft.; (s).

396. *Schizaea elegans* (Vahl) Sw.; MO. 12/12/56 [1/?]; 4,500 ft.; seaside of mountain range between Maracai and Choroni (n).

397. *Selaginella diffusa* (C. Presl) Spring; MO, YU. 12/12/56 [1/12]; 4,000 ft.; seaside of mountain range between Maracai and Choroni (n).

398. *Lycopodium* (n), not located. 12/12/56 [1/?]; 5,000 ft.; seaside of mountain range between Maracai and Choroni (n).

399. *Lycopodium cernuum* L.; YU. 12/12/56 [1/3]; 5,500 ft.; seaside of mountains between Maracai and Choroni (n).

399β. *Lycopodium cernuum* L.; YU, mounted on same sheet as 399. 12/12/56 [1/1]; 6,000 ft.; mountains between Maracai and Choroni on dry south side (s).

400. *Lycopodium thyoides* Humb. & Bonpl. ex Willd.; YU. 12/12/56 [1/1]; 6,500 ft.; seaside of mountains between Maracai and Choroni (n).

401. Not located. 6/1/57 [1/?]; highest mountains E of Colonia Tovar (n).

402. *Selaginella porphyrospora* A. Braun; YU. 12/12/56 [1/3]; 5,000 ft.; seaside of mountains between Maracai and Choroni (n).

403. *Selaginella flagellata* Spring; YU. 12/12/56 [1/4]; 3,000 ft.; seaside of mountains between Maracai and Choroni (n).

404. *Cheilanthes* sp.; YU; cited by Eaton (1861) as *Pellaea decomposita* Hook. [could be *C. marginata* H.B.K.]. 7/3/57 [1/?]; 3,500 ft.; seaside of

mountain range between Valencia and San Estevan (n).

405. *Athyrium filix-femina* (L.) Roth; MO, YU. 6/1/57 [1/22]; 8,000 ft.; 12 mi. E of Colonia Tovar, highest mountains (n).

406. *Grammitis moniliformis* (Lagasca ex Sw.) Kaulf.; YU; cited by Eaton (1861). 29/1/57 [1/?]; 7,000 ft.; seaside of mountains between Maracai and Choroni (n).

407. *Polypodium hygrometricum* Splitg.; YU. 28/1/57 [1/1]; 3,000 ft.; seaside of mountains between Maracai and Choroni (n).

408. *Bolbitis hemiotis* (Maxon) Ching; YU. 29/1/57 [1/5]; 4,000 ft.; seaside of mountains between Maracai and Choroni (n).

409. *Campyloneurum occultum* (Christ) L. D. Gómez; YU. 29/1/57 [1/3]; 6,000 ft.; seaside of mountains between Maracai and Choroni (n).

410. *Campyloneurum magnificum* T. Moore; YU—4 sheets, collected on two different dates; these are SYNTYPES of *Polypodium fendleri* D. Eaton, Mem. Amer. Acad. Arts, n.s. 8: 199. 1861; ISOSYNTYPES, MO—2. [2/13]; 4,000 ft.; seaside of mountains between Petaquira and the sea (n).

411. *Asplenium* sp.; YU; cited by Eaton (1861) as *A. salicifolium* L. 12/2/58 [1/?]; 4,000 ft.; seaside of mountains between Petaquira and Cariaca (n).

412. *Tectaria plantaginea* (Jacq.) Maxon var. *plantaginea*; MO, YU—2. 9/2/57 [1/18]; 4,000 ft.; seaside of mountains between Petaquira and the sea (n).

413. *Polypodium sessilifolium* Desv.; YU. 9/2/57 [1/2]; 5,000 ft.; seaside of mountains between Petaquira and the sea (n).

414. *Polypodium* aff. *fraxinifolium* Jacq.; YU. 29/1/57 [1/1]; 6,500 ft.; seaside of mountains between Maracai and Choroni (n).

415. *Polypodium triseriale* Sw.; YU. 29/1/57 [1/1]; 6,000 ft.; seaside of mountains between Maracai and Choroni (n).

416. *Thelypteris (Amauropelta) oligocarpa* (Humb. & Bonpl. ex Willd.) Ching; YU. 12/12/56 [1/1]; 2,500 ft.; seaside of mountain range between Maracai and Choroni (n).

417. *Polypodium (Phlebodium) aureum* L.; YU. [2/1]; 3,000 ft.; seaside of mountain range between Maracai and Choroni (n).

418. *Polypodium lasiopus* Klotzsch; YU. 29/1/57 [1/3]; 6,500 ft.; seaside of mountains between Maracai and Choroni (n).

419. *Microgramma tecta* (Kaulf.) Alston; MO, YU. [2/22]; 2,000 ft.; seaside of mountains between Petaquira and the sea (n).

420. *Microgramma lycopodioides* (L.) Copel.; MO, YU. [2/15]; 2,500 ft.; seaside of mountains between Maracai and Choroni (n).

421. *Pleopeltis percussa* (Cav.) Hook. & Grev.; MO, YU. [3/3]; 4,000 ft.; seaside of mountains between Maracai and Choroni (n).

422. *Polypodium sororium* Humb. & Bonpl. ex Willd.; MO, YU. 9/2/57 [1/6]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

423. *Dicranoglossum furcatum* (L.) J. Smith; YU. 9/2/57 [1/2]; 3,000 ft.; seaside of coast range of mountains (n).

424. *Vittaria costata* Kunze; YU. 29/1/57 [1/1]; 5,500 ft.; seaside of mountain range between Maracai and Choroni (n).

425. *Anetium citrifolium* (L.) Splitg.; YU. 29/1/57 [1/2]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

426. *Olfersia cervina* (L.) Kunze; MO, YU—3. 9/2/57 [1/4]; 4,000 ft.; seaside of mountain range between Petaquira and Chichiribichi (n).

427. Not located. 29/1/57 [1/?]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

428. *Elaphoglossum herminieri* (Bory & Féé ex Féé) T. Moore; YU. 29/1/57 [1/1]; 3,500 ft.; seaside of mountain range between Maracai and Choroni (n).

429. *Elaphoglossum lingua* (C. Presl) Brackenr.; YU. 3,500 ft.; seaside of mountain range between Maracai and Choroni (n); 29/1/57 [1/2] (s).

430. *Elaphoglossum* sp.; YU; cited by Eaton (1861) as *Acrostichum apodium* Kaulf. 29/1/57 [1/?]; 3,500 ft.; seaside of mountain range between Maracai and Choroni (n).

431. *Hypolepis stuebelii* Hieron.; MO, YU. [3/4]; 3,000 ft.; seaside of mountain range between Petaquira and the sea, also farther west (n).

432. *Asplenium auriculatum* Sw.; YU. 29/1/57 [1/1]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

433. *Asplenium pteropus* Kaulf.; MO, YU. [2/8]; 5,000 ft.; seaside of mountain range between Petaquira and Choroni (n).

434. *Asplenium cirrhatum* Rich. ex Willd.; YU. 9/2/57 [1/3]; 5,000 ft.; seaside of mountain range between Petaquira and the sea (n).

435. *Diplazium pedatum* Klotzsch; YU. [2/1]; 5,000 ft.; seaside of mountain range between Maracai and Choroni and between Petaquira and the sea (n).

435β. *Diplazium pedatum* Klotzsch; YU. 12/12/56 [1/1] (s).

436. *Diplazium pedatum* Klotzsch; MO, YU. 29/1/57 [1/7]; 6,000 ft.; seaside of mountain range between Maracai and Choroni (n).

437. *Thelypteris (Amauropelta) diplazioides* (Moritz ex Mett.) Ching; YU. 26/1/57 [1/1]; 100 ft.; near Colombia N of Choroni (n).

438. *Thelypteris (Amauropelta) balbisii* (Sprengel) Ching; YU. 26/1/57 [1/1]; 200 ft.; near Colombia on the coast (n).

439. *Thelypteris (Amauropelta)* sp., aff. *gracilis* (Hedward) Proctor; YU. 29/1/57 [1/1]; 3,500 ft.; seaside of mountain range between Maracai and Choroni (n).

440. *Thelypteris (Amauropelta) pilosula* (Mett.) R. Tryon; YU. 6/1/57 [1/1]; 8,000 ft.; highest mountains E of Colonia Tovar (n).

441. *Thelypteris (Cyclosorus) hispidula* (Decne.) Reed; YU. [2/1]; 4,000 ft.; a few mi. SW of Colonia Tovar (n).

442. Not located. 25/1/57 [1/?]; 300 ft.; seaside of mountains between Maracai and Choroni (n).

443. *Cyclopeltis semicordata* (Sw.) J. Smith; MO. 25/1/57 [1/?]; 200 ft.; between Choroni and Colombia (n).

444. "Ctenitis microchlaena" (Féé) A. R. Smith, comb. ined.; YU. 9/2/57 [1/1]; 5,000 ft.; seaside of mountains between Petaquira and the sea (n).

445. *Thelypteris (Goniopteris) nephrodioides* (Klotzsch) Proctor; YU. 9/2/57 [1/1]; 3,000 ft.; seaside of mountains between Petaquira and the sea (n).

446. *Thelypteris (Goniopteris) paucijuga* (Klotzsch) A. R. Smith, vel aff.; YU. 9/2/57 [1/3]; 4,000 ft.;

seaside of mountains between Petaqure and the sea (n).

447. *Ctenitis pulverulenta* (Poiret) Copel.; K, YU—2; cited by Christensen (1920) as *Dryopteris kasteniana* (Klotzsch) Hieron. 9/2/57 [1/3]; 3,000 ft.; seaside of mountains between Petaqure and the sea (n).

448. *Dennstaedtia bipinnata* (Cav.) Maxon; MO, YU—2. [3/5]; 4,000 ft.; seaside of mountains north of Colonia Tovar (n).

449. = 450β (n).

450. *Dicranopteris seminuda* (Klotzsch) Maxon; MO, YU—2. [3/20]; 6,500 ft.; high mountains NE of Colonia [Tovar] (n).

450β. *Dicranopteris flexuosa* (Schrader) L. Underw.; MO, YU. 9/2/57 [1/6] (s).

451. *Trichomanes (Acarpacrium) trigonum* Desv.; YU. 28/1/57 [1/1]; 4,500 ft.; seaside of mountain range between Maracai and Choroni (n).

452. *Trichomanes (Didymoglossum) punctatum* Poiret subsp. *sphenoides* (Kunze) W. Boer; B, G, GH, MO, YU; cited by Wessels Boer (1962). 29/1/57 [1/19]; 4,500 ft.; seaside of mountains between Maracai and Choroni (n).

453. *Trichomanes (Lecanium) membranaceum* L.; MO, YU. 10/2/57 [1/20]; 3,000 ft.; seaside of mountain range between Petaqure and the sea (n).

454. *Trichomanes (Didymoglossum) lineolatum* (Bosch) Hook.; B, G, GH, MO, YU; cited by Wessels Boer (1962). 10/2/57 [1/16]; 3,500 ft.; seaside of mountain range between Petaqure and the sea (n).

455. *Trichomanes (Microgonium) ekmanii* W. Boer; B, G, GH, L, MO, US; cited by Wessels Boer (1962). 13/12/56 [1/?]; 5,500 ft.; seaside of mountains between Maracai and Choroni (n).

456. *Trichomanes (Lacosteopsis) rupestre* (Raddi) Bosch; YU. 29/1/57 [1/2]; 3,000 ft.; seaside of mountains between Maracai and Choroni (n).

457. *Hymenophyllum (Sphaerocionium) elegans* Sprengel forma *minor* C. Morton; GH, MO, YU; cited by Morton (1947). 29/1/57 [1/19]; 6,200 ft.; seaside of mountains between Maracai and Choroni (n).

458. *Hymenophyllum (Sphaerocionium) hirsutum* (L.) Sw. 29/1/57 [1/?]; 6,000 ft.; seaside of mountain ridge between Maracai and Choroni (n).

459. *Trichomanes (Lacosteopsis) debile* Bosch; MO, YU—2. 10/3/57 [1/14]; 5,000 ft.; seaside of mountains between Valencia and San Estevan (n).

460. *Danaea elliptica* J. E. Smith; MO, YU. 3,500 ft.; seaside of mountain range between Petaqure and Chichiribichi (n); 9/2/57 [1/10] (s).

461. *Selaginella haematodes* (Kunze) Spring in Martius; MO, YU. 9/2/57 [1/16]; 2,500 ft.; seaside of mountain range between Petaqure and Chichiribichi (n).

462. = 313, not located.

463. *Elaphoglossum ornatum* (Mett.) Christ; K, YU; cited by Mickel in Smith (1985). [2/4]; 3,000 ft.; seaside of mountain range between Agua Blanca and Cumbote (n).

464. *Pleopeltis percussa* (Cav.) Hook. & Grev.; YU. [?/1]; 6,500 ft.; Colonia Tovar (n). On same sheet as 421.

465. *Grammitis* sp.; YU; cited by Eaton (1861) as *Polypodium truncicola* Klotzsch. [2/?]; 6,000 ft.; seaside of mountains between Valencia and San Estevan and between Agua Blanca and Cumbote (n).

466. *Elaphoglossum* sp.; YU; cited by Eaton (1861) as *Acrostichum perelegans* Fée. 7/3/57 [1/?]; 4,000 ft.; seaside of mountain range between Valencia and Campanero (n).

467. *Grammitis chrysleri* (Copel.) Proctor; YU. 30/1/58 [1/3]; 6,500 ft.; seaside of mountains between Agua Blanca and Cumbote (n).

468. *Adiantum latifolium* Lam.; YU. 7/3/57 [1/2]; 1,000 ft.; between Valencia and San Estevan, seaside of mountain range (n).

469. *Adiantum petiolatum* Desv.; YU. [2/4]; 500–1,000 ft.; near San Estevan a few mi. N of Puerto Cabello (n).

469β. *Adiantum* sp.; YU; cited by Eaton (1861) as *A. kaulfussii* Kunze [may be *A. petiolatum* Desv.].

470. = 469β (n), not located.

471. *Polypodium triseriale* Sw.; YU. 7/5/57 [1/1]; 7,000 ft.; high mountains E of Colonia [Tovar] (n).

472. *Thelypteris (Amauropelta) pachyrhachis* (Kunze ex Mett.) Ching var. *pachyrhachis*; GH, MO, YU. [2/6]; 4,000 ft.; seaside of mountains between Agua Blanca and Cumbote, and between Valencia and San Estevan (n).

473. *Thelypteris (Cyclosorus) conspersa* (Schrader) A. R. Smith; YU. [2/3]; 4,000 ft.; Macarao River valley W of Caracas, also seaside of mountains between Valencia and San Estevan (n).

473. *Thelypteris (Cyclosorus) hispidula*; YU. [?/3].

474. *Thelypteris (Goniopteris) straminea* (Baker) Reed; YU; this is an ISOTYPE of *Polypodium stramineum* Baker in Hook. & Baker, Syn. Fil. 316. 1867. [1/4]; 2,300 ft.; Piedernales near Güigüe (n).

475. *Thelypteris (Cyclosorus) hispidula* (Decne.) Reed; YU. 7/3/57 [1/1]; 2,500 ft.; seaside of mountains between Valencia and San Estevan (n).

476. *Thelypteris (Steiropteris) leprieurii* (Hook.) R. Tryon var. *costalis* (Baker) A. R. Smith; K; this is an ISOTYPE of *Aspidium costale* Mett. ex Kuhn, Linnaea 36: 111. 1869. 7/3/57 [1/?]; 1,500 ft.; seaside of mountains between Valencia and San Estevan (n).

477. *Thelypteris (Steiropteris) leprieurii* (Hook.) R. Tryon var. *costalis* (Baker) A. R. Smith; YU. 7/3/57 [1/1]; 1,500 ft.; seaside of mountain range between Valencia and San Estevan (n).

478. Not located. 7/3/57 [1/?]; 1,000 ft.; seaside of mountain range between Valencia and San Estevan (n).

479. *Lindsaea stricta* (Sw.) Dryander var. *stricta*; G, GH, GOET, K, MO, PH, YU; cited by Kramer (1957). 7/3/57 [1/12]; 4,000 ft.; seaside of mountain range between Valencia and San Estevan (n).

480. *Cnemidaria spectabilis* (Kunze) R. Tryon var. *spectabilis*; GH, K, MO, YU—2; cited by Stolze (1974). 7/3/57 [1/9]; 4,500 ft.; seaside of mountain range between Valencia and San Estevan (n).

481. *Hymenophyllum (Sphaerocionium) dependens* C. Morton; GH, US, MO, YU; cited by Morton (1947). 29/1/58 [1/?]; 5,000 ft.; seaside of mountain range between Agua Blanca and Cumbote (n).

482. *Dicranopteris pectinata* (Willd.) L. Underw.; MO, YU. 7/3/57 [1/6]; 6,000 ft.; seaside of mountains between Valencia and San Estevan (n).

483. *Dicranopteris pectinata* (Willd.) L. Underw.; MO, YU. 7/3/57 [1/5]; 5,500 ft.; seaside of mountains between Valencia and San Estevan (n).

484. Not located. 7/3/57 [1/?]; 5,500 ft.; seaside of mountains between Valencia and San Estevan (n).

485. *Schizaea poeppigiana* Sturm in Martius; MO. 27/2/57 [1/?]; 5,800 ft.; a few mi. S of Colonia Tovar (n).

486. = 322, *Selaginella* (n), not located. 7/3/57 [1/?]; 4,000 ft.; seaside of mountains between Valencia and San Estevan (n).

487. *Selaginella cruciformis* Alston ex Crabbe & Jermy; BM; cited by Alston et al. (1981). 7/3/57 [1/?]; 3,000 ft.; seaside of mountains between Valencia and San Estevan (n).

487?. *Lophosoria quadripinnata* (J. Gmelin) C. Chr.; YU. [?/7].

488. *Polypodium fraxinifolium* Jacq.; YU. 26/3/57 [1/1]; 8,000 ft.; high mountains E of Colonia Tovar (n).

489. *Asplenium serratum* L.; YU. 7/3/57 [1/3]; 3,500 ft.; seaside of mountain range between Valencia and San Estevan (n).

490. Not located. 7/3/57 [1/?]; 4,000 ft.; seaside of mountain range between Valencia and San Estevan (n).

491. *Cyathea barringtonii* A. R. Smith ex Lellinger; YU; cited by Barrington (1978) as *Trichipteris cordata* (Klotzsch) R. Tryon. [2/2]; 6,300 ft.; seaside of mountain range between Maracai and Choroni (n).

492. *Cyathea villosa* Willd.; YU. [2/4]; 5,800 ft.; seaside of mountain range between Agua Blanca and Cumbote, also savannahs S of Colonia [Tovar] (n).

492?. *Cyathea villosa* Willd.; YU.

493. *Selaginella flabellata* (L.) Spring var. *latifrons* A. Braun, Ann. Sci. Nat. Bot., V. 3: 278. 1865; ISOTYPES, BM, MO, YU; cited by Alston et al. (1981). 30/1/58 [1/4]; 3,000 ft.; seaside of mountains between Agua Blanca and Cumbote (n).

494. *Selaginella cavifolia* A. Braun; YU. [2/4]; 6,000 ft.; Colonia Tovar (n).

495. *Elaphoglossum variolatum* Mickel; YU. 4,000 ft.; seaside of mountain range between Agua Blanca and Cumbote (n); 30/1/58 [1/1] (s).

496. *Adiantum* sp.; YU; cited by Eaton (1861) as *A. capillus-veneris* L. 20/2/58 [1/?]; 3,000 ft.; Hacienda Curisal (n).

497. *Diplazium celtidifolium* Kunze; YU. 22/4/58 [1/1]; 4,500 ft.; seaside of mountain range between Petaquira and the sea (n).

498. *Diplazium flavescens* (Mett.) Christ; MO, YU. 22/4/58 [1/?]; 4,000 ft.; seaside of mountain range between Petaquira and the sea (n).

499. *Rumohra adiantiformis* (G. Forster) Ching; YU; cited by Eaton (1861) as *Aspidium coriaceum* Sw. 22/4/58 [1/?]; 5,500 ft.; seaside of mountains between Petaquira and the sea (n).

s.n. *Lindsaea klotzschiana* Moritz in Ettingshausen; YU; originally det. *L. quadrangularis* Raddi.

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*E. meridense* (Klotzsch) T. Moore—269  
*E. moritzianum* (Klotzsch) T. Moore—266  
*E. ornatum* (Mett.) Christ—463  
*E. peltatum* (Sw.) Urban forma *flabellatum* (Humb. & Bonpl. ex Willd.) Mickel—263  
*E. peltatum* (Sw.) Urban var. *peltatum*—361  
*E. piloselloides* (C. Presl) T. Moore—267  
*E. pusillum* (Mett. ex Kuhn) C. Chr.—362; 364, pt  
*E. sellowianum* (Klotzsch ex Kuhn) C. Chr.—288; 295; 295 $\beta$   
*E. sporadolepis* (Kunze ex Kuhn) C. Chr.—291; 293, pt; 294; 296  
*E. succubus* Mickel—275  
*E. tectum* (Humb. & Bonpl. ex Willd.) T. Moore—273; ad 273; 274  
*E. tenuiculum* (Féé) T. Moore—272; 295 $\alpha$   
*E. tovarensis* (Moritz ex Kuhn) T. Moore—292  
*E. variolatum* Mickel—495  
*E. sp.*—277; 289; 430; 466

*Eriosorus flexuosus* (H.B.K.) Copel. var. *flexuosus*—300  
*E. hirtus* (H.B.K.) Copel. var. *hirtus*—301; 358  
*E. hispidulus* (Kunze) Vareschi var. *hispidulus*—359  
*Grammitis alfarii* (J. D. Smith) C. Morton—208, pt  
*G. apiculata* (Kunze ex Klotzsch) Seymour—218  
*G. asplenifolia* (L.) Proctor—213 $\beta$ ; 351  
*G. chrysleri* (Copel.) Proctor—213; 467  
*G. concinna* A. R. Smith—212  
*G. cultrata* (Willd.) Proctor—210  
*G. fendleri* (Copel.) Lellinger—215  
*G. firma* (J. Smith) C. Morton—217  
*G. jamesonii* (Hook.) C. Morton—255  
*G. jungermannioides* (Klotzsch) Ching—257  
*G. leptopoda* (C. H. Wright) Copel.—256  
*G. longisetulosa* (Copel.) C. Morton—216  
*G. moniliformis* (Lagasca ex Sw.) Kaulf.—406  
*G. phlegmaria* (J. Smith) Proctor—207  
*G. pilosissima* (Mart. & Gal.) C. Morton—338  
*G. senilis* (Fée) C. Morton—208, pt; 209  
*G. cf. senilis* (Fée) C. Morton—348  
*G. aff. *subtilis** (Kunze ex Klotzsch) C. Morton—349  
*G. taxifolia* (L.) Proctor—381  
*G. trichomanoides* (Sw.) Ching—211, pt  
*G. truncicola* (Klotzsch) C. Morton—211, pt  
*G. xiphopteroides* (Liebm.) A. R. Smith—219  
*G. sp.*—211 $\beta$ ; 350; 465  
*Hemidictyum marginatum* (L.) C. Presl—167  
*Hemionitis palmata* L.—303  
*H. rufa* (L.) Sw.—302  
*Histiopteris incisa* (Thunb.) J. Smith—93  
*Hymenophyllum* (*Mecodium*) *apiculatum* Mett. ex Kuhn—32; ad 32; 393  
*H. (Mecodium) asplenoides* Sw.—36  
*H. (Mecodium) axillare* Sw.—28  
*H. (Sphaerocionium) dependens* C. Morton—481  
*H. (Sphaerocionium) elegans* Sprengel forma *minor* C. Morton—457  
*H. (Mecodium) *fendlerianum** Sturm in Martius—31, pt; 35  
*H. (Sphaerocionium) *fragile** (Hedwig) C. Morton—38  
*H. (Ptychophyllum) *fucoides** (Sw.) Sw.—27; 27 $\beta$   
*H. (Sphaerocionium) *hirsutum** (L.) Sw.—37; 37 $\beta$ ; 458  
*H. (Sphaerocionium) *hirsutum** (L.) Sw., vel aff.—31, pt  
*H. (Sphaerocionium) *karstenianum** Sturm—39  
*H. (Sphaerocionium) *lanatum** Fée—328; ad 328; 387  
*H. (Sphaerocionium) *microcarpum** Desv.—33  
*H. (Mecodium) *polyanthos** (Sw.) Sw.—30; 394  
*H. (Sphaerocionium) *trichophyllum** H.B.K.—327  
*H. (Hymenophyllum) *tunbrigense** (L.) J. E. Smith—29  
*H. (Mecodium) *undulatum** (Sw.) Sw.—34  
*H. (Sphaerocionium) sp., undescribed?*—31, pt  
*Hypolepis bogotensis* Karsten—64, pt; 64 $\beta$ , pt  
*H. parallelogramma* (Kunze) C. Presl—66; ad 66  
*H. stuebelii* Hieron.—431  
*H. viscosa* Karsten—64, pt; 64 $\beta$ , pt  
*Lastreopsis effusa* (Sw.) Tindale subsp. *divergens* (Willd.) Tindale—205  
*L. exculta* (Mett.) Tindale—330  
*Lindsaea klotzschiana* Moritz in Ettingshausen—63 $\alpha$ ; 63 $\beta$ ; 379; 380, pt  
*L. lancea* (L.) Beddome var. *lancea*—378, pt  
*L. stricta* (Sw.) Dryander var. *stricta*—377; 378, pt; 380, pt; 479  
*Lomariopsis fendleri* D. Eaton—335  
*Lonchitis hirsuta* L.—100  
*Lophosoria quadripinnata* (J. Gmelin) C. Chr.—48; 487?  
*Loxoscaphe theciferum* (H.B.K.) T. Moore—62  
*Lycopodium acerosum* Sw.—317  
*L. alopecuroides* L.—315  
*L. cernuum* L.—318; 399; 399 $\beta$   
*L. clavatum* L.—314; 314 $\beta$   
*L. myrsinites* Lam.—320  
*L. cf. pendulinum* Hook.—347  
*L. reflexum* Lam.—316  
*L. taxifolium* Sw.—319  
*L. thyoides* Humb. & Bonpl. ex Willd.—313; 400  
*L. sp.*—337; 398  
*Lygodium venustum* Sw.—14  
*Marattia laevis* J. E. Smith—3  
*Microgramma lycopodioides* (L.) Copel.—420  
*M. reptans* (Cav.) A. R. Smith—354  
*M. tecta* (Kaulf.) Alston—419  
*M. vacciniifolia* (Langsd. & Fischer) Copel.—248  
*Nephrolepis occidentalis* Kunze—161  
*N. pendula* (Raddi) J. Smith—162; 162 $\beta$   
*N. rivularis* (Vahl) Mett. ex Krug—370  
*Niphidium crassifolium* (L.) Lellinger—223  
*N. mortonianum* Lellinger—222  
*Olfersia cervina* (L.) Kunze—426  
*Ophioglossum nudicaule* L. f.—342  
*O. reticulatum* L.—312  
*Osmunda regalis* L.—5  
*Paesia glandulosa* (Sw.) Kuhn—94  
*Pellaea ovata* (Desv.) Weath.—89  
*Phanerophlebia juglandifolia* (Humb. & Bonpl. ex Willd.) J. Smith—233  
*Pityrogramma calomelanos* (L.) Link—298  
*P. chrysocoma* (Desv.) Maxon ex Domin—357?  
*P. tartarea* (Cav.) Maxon—299  
*P. trifoliata* (L.) R. Tryon—297  
*Plagiogyria semicordata* (C. Presl) Christ—325  
*Pleopeltis macrocarpa* (Bory ex Willd.) Kaulf.—249; 250  
*P. percussa* (Cav.) Hook. & Grev.—421; 464  
*×Pleopodium leucosporum* (Klotzsch) Mickel & Beitel—251  
*Polybotrya canaliculata* Klotzsch—262  
*P. serratifolia* (Fée) Klotzsch—261  
*Polypodium (Phlebodium) aureum* L.—417  
*P. boliviari* Sota—343  
*P. buchtienii* Christ & Rosenstock—246  
*P. camptophyllum* Fée var. *lachniferum* (Hieron.) A. M. Evans—221 $\gamma$   
*P. consimile* Mett. var. *consimile*—220; 220 $\beta$   
*P. dispersum* A. M. Evans—221, pt  
*P. dissimile* L.—238; 238 $\beta$   
*P. eurybasis* C. Chr.—221, pt; 221 $\beta$   
*P. fraxinifolium* Jacq.—234; 235; 236; 488  
*P. aff. *fraxinifolium** Jacq.—237; 414  
*P. funckii* Mett.—243  
*P. fuscopetiolatum* A. R. Smith—242; 341  
*P. hygrometricum* Splitg.—407  
*P. lasiopus* Klotzsch—244; 418  
*P. loricatum* L.—353  
*P. moritzianum* Link—214  
*P. plumula* Humb. & Bonpl. ex Willd.—221, pt  
*P. polypodioides* (L.) Watt var. *burchellii* (Baker) Weath.—253  
*P. (Phlebodium) *pseudoaureum** Cav.—241  
*P. remotum* Desv.—245  
*P. sessilifolium* Desv.—240; 413  
*P. sororium* Humb. & Bonpl. ex Willd.—422  
*P. steirolepis* C. Chr.—247  
*P. thyssanolepis* A. Braun ex Klotzsch—252

*P. triseriale* Sw.—352; 415; 471  
*P. ursipes* Moritz ex C. Chr.—254  
*P. sp.*—221δ; 239; 243?  
*Polystichum muricatum* (L.) Féé—172; 174  
*P. platyphyllum* (Willd.) C. Presl—175  
*P. sp.*, aff. *polyphyllum* (C. Presl) C. Presl—171  
*P. sp.*—173  
*Pteridium arachnoideum* (Kaulf.) Maxon—104  
*Pteris altissima* Poiret in Lam.—365  
*P. consanguinea* Mett. ex Kuhn—97  
*P. deflexa* Link—101; 102  
*P. gigantea* Willd.—95  
*P. grandifolia* L.—96  
*P. longifolia* L.—105  
*P. podophylla* Sw.—98, pt  
*P. propinqua* Agardh—98, pt; 99  
*P. quadriaurita* Retz.—103; 103β  
*Rumohra adiantiformis* (G. Forster) Ching—499  
*Saccoloma domingense* (Sprengel) C. Chr.—61; 61β  
*S. elegans* Kaulf.—376  
*S. inaequale* (Kunze) Mett.—375  
*Salpichlaena volubilis* (Kaulf.) J. Smith—117, pt  
*Schizaea elegans* (Vahl) Sw.—396  
*S. poeppigiana* Sturm in Martius—485  
*Selaginella cavifolia* A. Braun—322, pt; 323; 494  
*S. cladorrhizans* A. Braun—324, pt  
*S. cruciformis* Alston ex Crabbe & Jermy—487  
*S. diffusa* (C. Presl) Spring—397  
*S. flabellata* (L.) Spring var. *latifrons* A. Braun—493  
*S. flagellata* Spring—324, pt; 403  
*S. haematodes* (Kunze) Spring in Martius—461  
*S. pallescens* (C. Presl) Spring—321; 321β  
*S. porphyrospora* A. Braun—402  
*S. viticulosa* Klotzsch—258, pt; 322, pt  
*S. sp.*—486  
*Sticherus bifidus* (Willd.) Ching—42  
*S. nudus* (Moritz ex Reichardt) Nakai—41  
*S. pennigera* (Martius) Copel.—43  
*S. rubiginosus* (Mett.) Nakai—40  
*Stigmatopteris nephrodioides* (Klotzsch) C. Chr.—198  
*Tectaria heracleifolia* (Willd.) L. Underw.—164; 164β  
*T. incisa* Cav.—165β; 166  
*T. incisa* Cav., vel aff.—165  
*T. plantaginea* (Jacq.) Maxon var. *plantaginea*—412  
*T. trifoliata* (L.) Cav.—165 additional  
*Thelypteris (Meniscium) arborescens* (Humb. & Bonpl. ex Willd.) C. Morton—232β  
*T. (Amauropelta) aspidioides* (Willd.) R. Tryon—306; 360  
*T. (Goniopteris) asterothrix* (Féé) Proctor—201  
*T. (Amauropelta) balbisii* (Sprengel) Ching—438  
*T. (Amauropelta) cheilanthoides* (Kunze) Proctor—187, pt  
*T. (Amauropelta) concinna* (Willd.) Ching—179, pt; 185, pt  
*T. (Amauropelta) concinna* (Willd.) Ching, vel aff.—176  
*T. (Cyclosorus) conspersa* (Schrader) A. R. Smith—473, pt  
*T. (Steiropteris) decussata* (L.) Proctor var. *decussata*—373  
*T. (Amauropelta) deflexa* (C. Presl) R. Tryon—186  
*T. (Amauropelta) diplazioides* (Moritz ex Mett.) Ching—159; 437  
*T. (Meniscium) ensiformis* (C. Chr.) R. Tryon—232, pt  
*T. (Steiropteris) fendleri* (D. Eaton) Reed—372  
*T. (Goniopteris) gemmulifera* (Hieron.) A. R. Smith—193; 193γ  
*T. (Cyclosorus) grandis* A. R. Smith var. *aequatorialis* (C. Chr.) A. R. Smith—188  
*T. (Cyclosorus) hispidula* (Decne.) Reed—191; 441; 473, pt; 475  
*T. (Steiropteris) leprieurii* (Hook.) R. Tryon var. *costalis* (Baker) A. R. Smith—476; 477  
*T. (Goniopteris) nephrodioides* (Klotzsch) Proctor—445  
*T. (Amauropelta) oligocarpa* (Humb. & Bonpl. ex Willd.) Ching—179, pt; 181, pt; 416  
*T. (Amauropelta) opposita* (Vahl) Ching—177  
*T. (Amauropelta) opposita* (Vahl) Ching, vel aff.—182  
*T. (Amauropelta) pachyrhachis* (Kunze ex Mett.) Ching var. *pachyrhachis*—187, pt; 472  
*T. (Cyclosorus) patens* (Sw.) Small var. *patens*—189; 192  
*T. (Cyclosorus) patens* (Sw.) Small var. *scabriuscula* (C. Presl) A. R. Smith—190  
*T. (Goniopteris) paucijuga* (Klotzsch) A. R. Smith—446  
*T. (Goniopteris) pennata* (Poiret in Lam.) C. Morton—200  
*T. (Amauropelta) pilosohispida* (Hook.) Alston—158  
*T. (Amauropelta) pilosula* (Mett.) R. Tryon—178; 180; 183; 184, pt; 440  
*T. (Goniopteris) poiteana* (Bory) Proctor—199  
*T. (Steiropteris) praetervisa* (Kuhn) A. R. Smith—371  
*T. (Amauropelta) proctorii* A. R. Smith & Lellinger—185, pt  
*T. (Amauropelta) pteroidea* (Klotzsch) R. Tryon—206  
*T. (Amauropelta) rufis* (Kunze) Proctor—185, pt; ad 185; 187, pt  
*T. (Amauropelta) rupestris* (Klotzsch) Reed—307  
*T. (Meniscium) salzmannii* (Féé) C. Morton—232, pt  
*T. (Amauropelta) scalaris* (Christ) Alston—181, pt  
*T. (Goniopteris) straminea* (Baker) Reed—474  
*T. (Goniopteris) tetragona* (Sw.) Small—196  
*T. sp.*, aff. *gracilis* (Heward) Proctor—439  
*Trichomanes (Lacosteopsis) capillaceum* L.—22; 395  
*T. (Achomanes) crispum* L.—388  
*T. (Lacosteopsis) debile* Bosch—459  
*T. (Lacosteopsis) diaphanum* H.B.K.—16, pt; 17; 18  
*T. (Microgonium) ekmanii* W. Boer—455  
*T. (Didymoglossum) lineolatum* (Bosch) Hook.—454  
*T. (Lecanium) membranaceum* L.—453  
*T. (Didymoglossum) ovale* (Fourn.) W. Boer—25; ad 25  
*T. (Neurophyllum) pinnatum* Hedwig—390  
*T. (Acarpacium) polypodioides* L.—329  
*T. (Didymoglossum) punctatum* Poiret subsp. *sphenoides* (Kunze) W. Boer—452  
*T. (Didymoglossum) pusillum* Sw.—24; ad 24  
*T. (Lacosteopsis) radicans*—20  
*T. (Didymoglossum) reptans* Sw.—23  
*T. (Pachychaetum) rigidum* Sw.—16, pt  
*T. (Achomanes) robustum* Fourn.—26  
*T. (Lacosteopsis) rupestre* (Raddi) Bosch—21; 456  
*T. (Acarpacium) trigonum* Desv.—451  
*T. (Achomanes) sp.*, undescribed?—388β; 389  
*Vittaria costata* Kunze—424  
*V. gardneriana* Féé—259β  
*V. graminifolia* Kaulf.—258, pt  
*V. moritziana* Mett.—259, pt  
*V. remota* Féé—260  
*V. stipitata* Kunze—259, pt